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# The BULLETIN

## American Society of Hospital Pharmacists

**EPILEPSY**

*Its medical treatment*

**PLANNING HOSPITAL PHARMACIES**

*Two articles with illustrations*

**INDEX NUMBER**

*For volume eight*

℞ VOLUME 8 NUMBER 6 NOVEMBER-DECEMBER 1951

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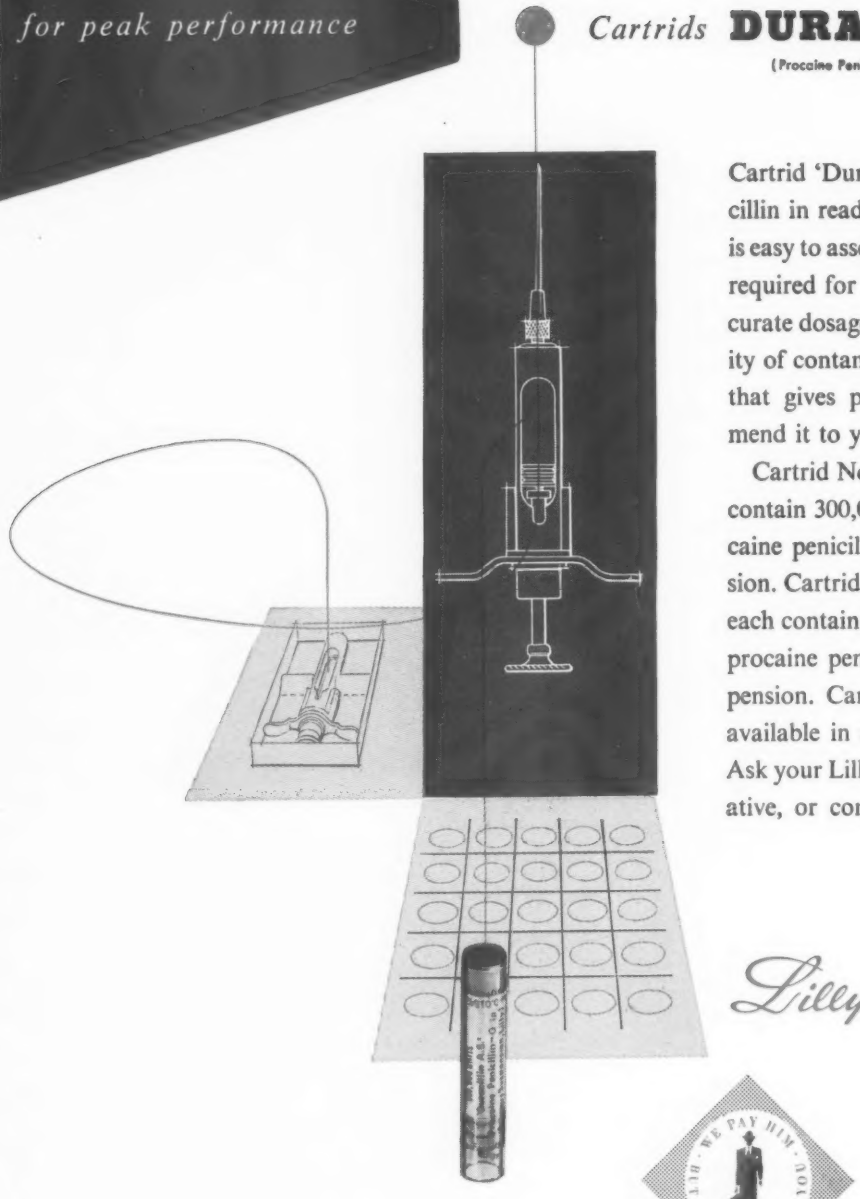

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# The BULLETIN
## American Society of Hospital Pharmacists

NOV-DEC 1951
VOLUME 8 NUMBER 6



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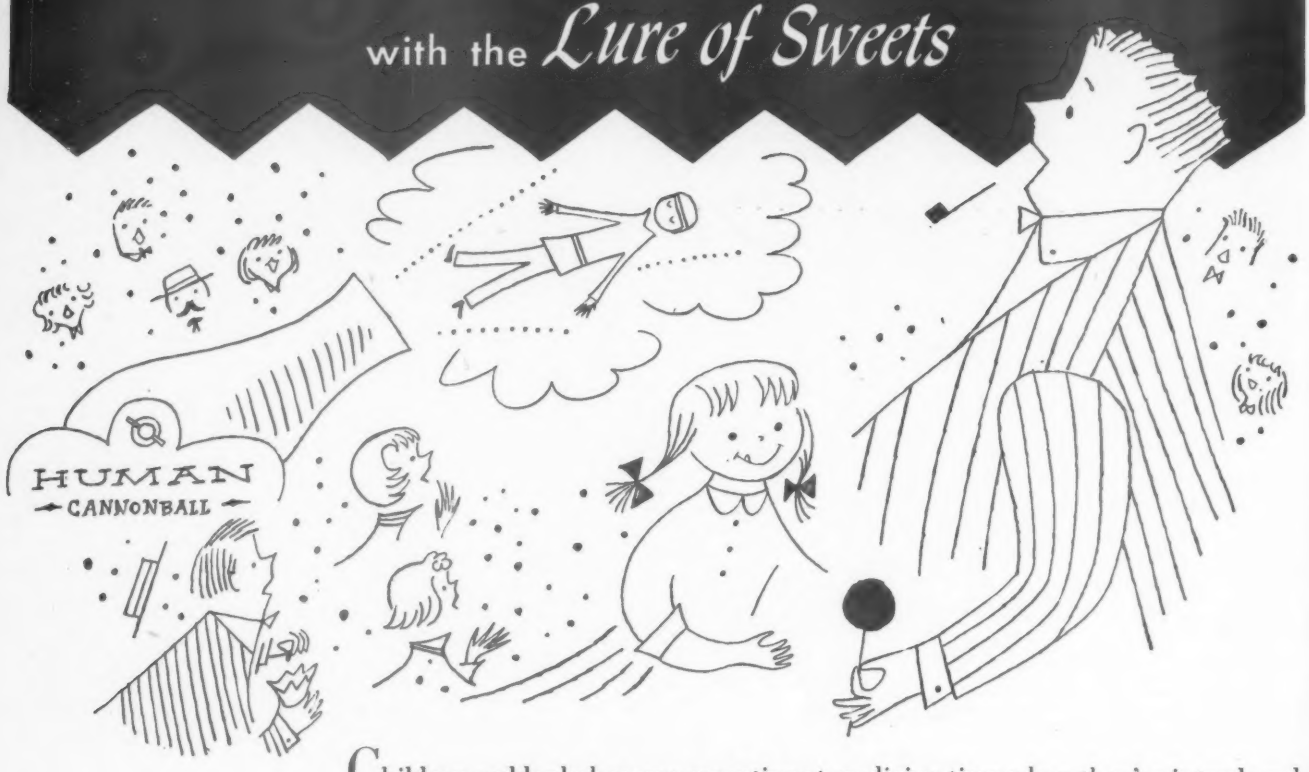


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**From India**

DEAR SIRS: I am an Indian native belonging to the State of Bombay and working as chief pharmacist in the King Edward VII Memorial Hospital, which is one of the largest of its kind in Asia. I have been working here as a pharmacist since 1948 following graduation from the Department of Chemical Technology of the Bombay University which is an Indian University. Our hospital receives THE BULLETIN regularly and I am one of the regular readers. I have been very much benefitted by reading THE BULLETIN and find that it is one of the useful sources of information on various subjects.

I am of the opinion that I could gain a great deal if I could work in one of the hospitals in the United States and also get my post-graduate degree in pharmacy. Will you please be kind enough to let me know the names of such institutions which offer such courses. I will be grateful to you if you will direct me through proper channels whereby I will try to get the admission by applying in proper time.

SHRI. V. G. KUDALKAR, *chief pharmacist*
*K. E. M. Hospital*
*Parel, Bombay 12, India*

**Plans for Pharmacy Requested**

DEAR SIRS: We are planning construction of a new hospital and would like to have your asistance in drawing up the plans for the pharmacy department. We would appreciate it very much if you would send us any literature or suggestions which you may have.

LOUIS E. PREBIL, *assistant administrator*
*St. Michael Hospital*
*Milwaukee, Wisconsin*

**Applies for Membership**

DEAR SIRS: I am sending an application for membership in the American Society of Hospital Pharmacists. I have been an active member of the American Pharmaceutical Association since my graduation from the School of Pharmacy at Duquesne University in 1951.

Thank you for your consideration of my application for membership in this fine organization. I shall be looking forward to hearing about the happenings in the field of hospital pharmacy through the medium of your excellent publication, THE BULLETIN.

SISTER MARGARET MARY, *pharmacist*
*The St. Joseph Riverside Hospital*
*Warren, Ohio*

**From ASHP Committees**

DEAR SIRS: I have been notified of the appointment to the Committee on Program and Public Relations for the 1951-1952 term. I feel that this is the most important standing committee of the Society and I shall consider it an honor and a privilege to serve with you and to assist in any way I can in planning the activities delegated to this important Committee.

ALBERT P. LAUVE, *chief pharmacist*
*Mercy Hospital*
*New Orleans, La.*

DEAR SIRS: As you well know, I am anxious to do anything I can to help hospital pharmacy and therefore I will be pleased to serve on the Program and Public Relations Committee of the Society.

ALLEN V. R. BECK, *chief pharmacist*
*Indiana University Medical Center*
*Indianapolis, Ind.*

DEAR SIRS: This is to express my appreciation of your confidence in appointing me to the Society's Committee on Pharmacists in Government Service.

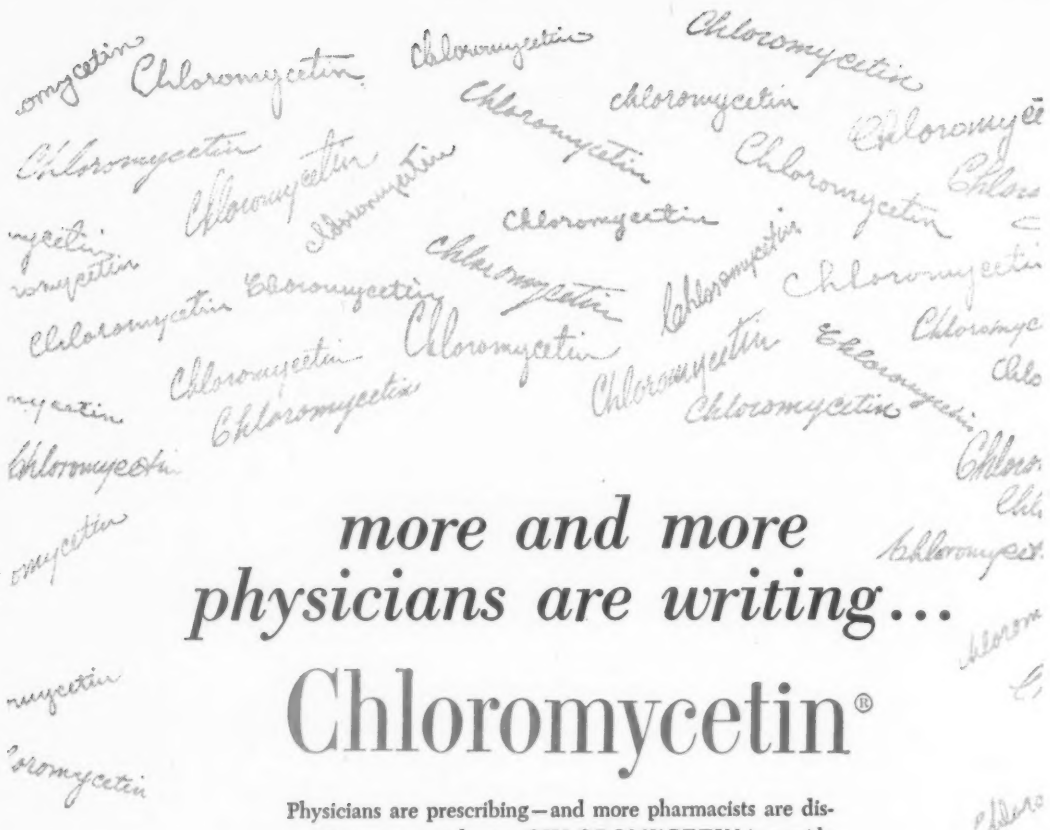
VICTOR H. CROUCH, *chief*
*Pharmacy Service*
*VA Kennedy Hospital*
*Memphis 15, Tenn.*

**From a Navy Pharmacist**

DEAR SIRS: I am a registered pharmacist in the states of Michigan and Washington. As a Naval Reservist, I have recently been recalled to active duty and am presently supervisor of the pharmacy here at the Naval Hospital.

As I am now in hospital work, I am interested in joining the American Society of Hospital Pharmacists and receiving THE BULLETIN. Also, I would like to obtain copies of THE BULLETIN for the past year. Thank you for your consideration.

CHAUNCEY C. ADAMS, *(Lt.jg.) MSC*
*U. S. Naval Hospital*
*Jacksonville, Fla.*



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EDITORIAL

# Clinic Pharmacies and the Profession

*by Don E. Francke*

Clinic pharmacies which challenge our profession today are not the same type of clinic pharmacies with which the majority of us are most familiar. The term clinic refers to an insituation for the diagnosis and treatment of outpatients. Traditionally, these have usually been associated with a nonprofit hospital or medical school, although of course there have been exceptions to this. The pharmacies in these clinics served as an integral unit in the total health care of the patient. They operated as a department of the hospital and served only patients and medical staff associated with the hospital. They did not fill prescriptions written by physicians not on the hospital staff nor for patients not registered in the hospital. Often, these clinic pharmacies supplied vast amounts of medicinals to indigent patients and thus were run at an operating loss.

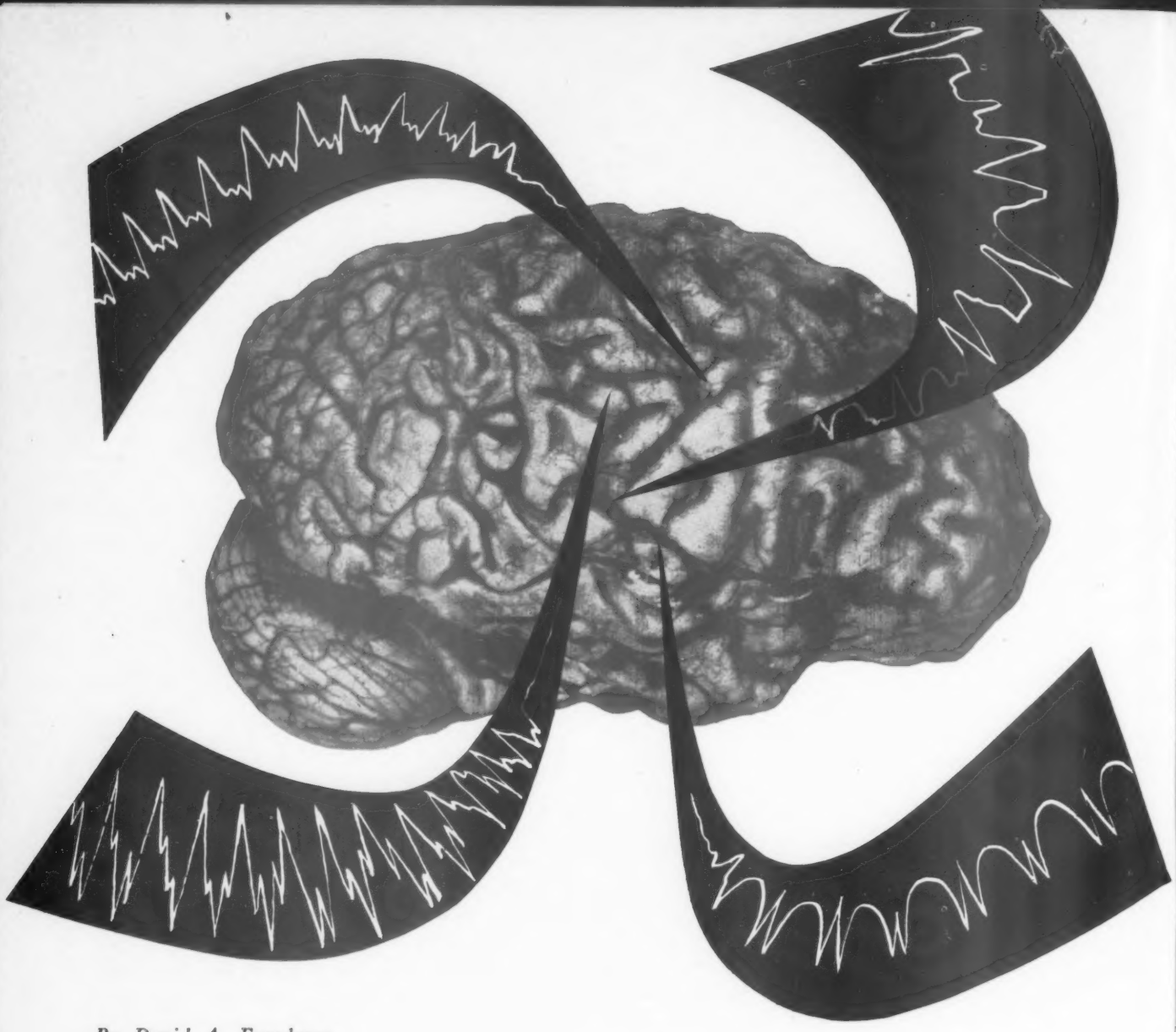
However, the type of clinic and the pharmacy associated with it which is now so rapidly increasing in numbers bears little resemblance to the traditional. The new type of clinic is in reality an organization for group medical practice and has arisen because of the high degree of specialization among medical practitioners. As a consequence of this specialization, better medical care can be given if physicians are associated in a group which provides the environment for convenient consultation to meet the total health needs of the people. This environment includes representation of most of the major medical specialties, common roentgenologic, laboratory, physical therapy and other facilities. And, whether from selfish pecuniary motives or a desire to give complete health service, a pharmacy.

It is, of course, the presence of the pharmacy in these group medical practice clinics and their impact upon our profession which concerns us. We have visited clinic pharmacies where the pharmacy is owned and operated by retail pharmacists—leading members of the American Pharmaceutical Association. These pharmacies fill prescriptions not only for patients and physicians in the clinic but for those from outside as well, and thus, in effect, become a specialized prescription store serving the neighborhood as well as a group of physicians. We have visited other clinic pharmacies which are owned by physicians, and where a pharmacist is employed to manage the pharmacy. The principal danger in the latter case, and this is from the public health standpoint, is that since the physician-owned pharmacy is a private monopoly established for the personal aggrandizement of physicians against their ethical code, there is a real danger of depriving patients of the latest and most therapeutically effective drugs which are readily available in other pharmacies of the community.

But, acknowledging the real objection to physician-owned clinic pharmacies, one question appears pertinent: will not the total effect upon our profession and upon the other pharmacies in the community be essentially the same whether the clinic pharmacy is owned by the pharmacist or by the physician? That, in the long run, is the question which must be fully understood by the leaders of pharmacy.

The American Pharmaceutical Association has taken a forthright stand on the question of physician-owned clinic pharmacies and has passed a strongly worded resolution condemning their establishment.

Under its Constitution and By-Laws the Society has approved clinic pharmacists for active membership, undoubtedly thinking of the traditional hospital type of clinic pharmacy. What is the place of the pharmacist in the physician-owned clinic pharmacy in the ASHP? And is the retail pharmacist, and his employees, who owns a clinic pharmacy eligible for active membership? These are questions which should be studied and answered by the Society's Committee on Constitution and By-laws. Yet even when these questions are answered from the Society's viewpoint, the increase in the number of pharmacies associated with group medical practice units will continue to plague the profession for years.



*By David A. Freedman*

THE recognition that epilepsy is a treatable disease is a recent event in medicine. One hundred years ago the consensus of opinion, both lay and medical, held that seizures were either visitations from God or the devil. Treatment corresponded, of course, to these conceptions and epileptics were alternately honored as holy men and exorcised as possessed. The few physicians who considered seizures to be due to bodily illness had only the vaguest empirical approaches to offer in therapy. A list of medications which runs the gamut from oil of vitriol to mistletoe and includes such items as turpentine, indigo and gold is sufficient indication of the state of affairs in the not so distant past.[1]

The first step toward effective therapy occurred on May 11, 1857 when Sir Charles Lacock mentioned the use of potassium bromide in the treatment of seizures associated with menses in hysterics. How Lacock came to use bromides is in itself an interesting illustration of the status of therapy at that period. He had noted a report in the German literature to the effect that potassium bromide produces impotence. Since major etiologic factors in the production of seizures were considered to be sexual excess and masturbation, Lacock reasoned that an anaphrodisiac would be effective in con-

DAVID A. FREEDMAN, M.D., is an instructor in Neurology, Department of Psychiatry and Neurology, Tulane University School of Medicine, New Orleans, La.

Presented at the Institute on Hospital Pharmacy, New Orleans, La., June 11—15, 1951.

The author wishes to express his appreciation to Dr. H. W. Gillen who reviewed the statistics on epileptics at Charity Hospital.

# THE PRESENT STATUS OF THE MEDICAL TREATMENT OF EPILEPSY

trolling epilepsy. He used the drug only in the treatment of hysterics where the relation of sex to seizures was considered to be particularly clear. In 1859 Wilks demonstrated that bromides are generally effective in controlling seizures.[2]

II

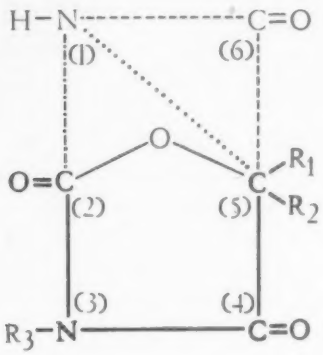
No further advance in the problem of treatment was made until 1912 when Hauptmann[3] introduced phenobarbital, a drug which proved to be both more efficacious and less toxic than bromides.

In the meantime, however, clinical observation had resulted in considerable clarification of the nature of epilepsy and the differentiation of several clinical pictures having in common only the occurrence of episodes of altered behavior. The relation of such episodes to alterations in the function of the brain was demonstrated and it was further shown that the characteristics of any given type of seizure could be related to the site within the brain from which it arose. It was demonstrated that the nature of a convulsive episode bears no relation to its etiologic cause; for example, an inflammation, a tumor, or a scar all will yield the same convulsive pattern if they involve the same area of the brain. Finally, it was observed that seizures not infrequently occur in the absence of all gross or microscopic evidence of brain pathology and represent a disorder of the function, rather than the structure of the brain. To this extremely large group of patients the designation "idiopathic epilepsy" was given.

In general three types of convulsive pattern were differentiated. These are 1) *grand mal epilepsy,* the classical form of attack. These seizures usually begin with an aura — a sensory experience as a flashing light, a bizarre taste, a peculiar odor, a feeling of dizziness, or a sensation in the stomach. This is followed by loss of consciousness and marked bodily rigidity and this in turn by violent clonic movements which are frequently accompanied by tongue biting and loss of sphincter control. Following such attacks the patient usually sleeps heavily for a considerable period of time. Not infrequently aborted forms of grand mal epilepsy occur. Only the aura may occur, or the patient may experience only motor phenomena and these localized to only a portion of the body. 2) *Petit mal seizures* are temporary lapses of consciousness, lasting but a few seconds. These usually occur in children and either disappear at puberty or become associated with grand mal epilepsy. A child suffering this condition may have several hundred such spells in the course of a day. Episodic myoclonic jerks, especially of the arms, head nodding attacks or sudden transitory episodes of loss of muscle tone may occur as part of petit mal. 3) *Psychomotor seizures* are lapses of consciousness lasting anywhere from a few minutes to several hours and characterized by repetitive movements and activities which often seem volitional but are actually unconscious. In the course of such attacks individuals may unwittingly commit acts of violence.

The introduction in 1929 of the electroencephalograph aided considerably in the differentiation and understanding of the various types of seizures outlined above, as well as in the demonstration that certain types of chronic behavior in children are accompanied by changes in brain function not unlike those occurring in epilepsy. Treatment of

FIGURE I. RELATION OF CHEMICAL STRUCTURE OF CLINICALLY AVAILABLE .. ANTIEPILEPTICS TO THEIR THERAPEUTIC ACTION.*




BOLD FACE: *Common Denominator*

DASH LINE: *Barbituric Acid Nucleus*

DOTTED LINE: *Hydantoin Nucleus*

THIN SOLID LINE: *Oxazolidine-2, 4-dione Nucleus*

| NUCLEUS AND DRUG | $R_1$ | $R_2$ | $R_3$ | Clinical Use |
|---|---|---|---|---|
| 1. *Barbituric Acid* | | | | |
| Phenobarbital | $C_6H_5$ | $C_2H_5$ | H | Grand mal |
| Mebaral | $C_6H_5$ | $C_2H_5$ | $CH_3$ | Grand mal |
| 2. *Hydantoin* | | | | |
| Diphenylhydantoin | $C_6H_5$ | $C_6H_5$ | H | Grand mal; PsM. |
| Mesantoin | $C_6H_5$ | $C_2H_5$ | $CH_3$ | Grand mal; PsM. |
| 5 ,5-phenyl thienyl hydantoin | $C_6H_5$ | $C_4H_3S$ | H | Grand mal |
| 3. *Oxazolidine-2,4-dione* | | | | |
| Trimethadione | $CH_3$ | $CH_3$ | $CH_3$ | Petit mal |
| Paradione | $C_2H_5$ | $CH_3$ | $CH_3$ | Petit mal |
| Epidon | $C_6H_5$ | $C_6H_5$ | H | Grand mal |
| Paradione | $C_6H_5$ | H | H | Grand mal<br>Petit mal; PsM. |

such cases with anticonvulsant drugs has often yielded gratifying results.

An important result of electroencephalographic investigation has been the demonstration of highly specific brain wave patterns for petit mal epilepsy. As will be indicated below, petit mal is treated with quite different drugs from those which are effective in grand mal and psychomotor epilepsy.

III

During the twenty five year period following Hauptmann's introduction of phenobarbital, little advance was made in the treatment of epilepsy. The fact that nervous tissue is more irritable in an alkaline than an acid environment led to the introduction of the ketogenic diet in 1921 and the observation that fluid retention yields seizures, to the dehydration regime in 1928.[2] These modes of therapy have disappeared with the availability of more effective drug treatment in recent years. They require rigorous regimes, often harder to sustain than the seizures themselves. Today we occasionally use dehydration of a mild form in the management of seizures occurring in association with the fluid retention of the premenstrual period or pregnancy. Beyond this there is little indication for this form of therapy in routine practice.

In 1937, Merritt and Putnam[4] reported the testing of some seven hundred compounds for their anticonvulsant properties. They made these studies with the aid of a device which enabled them to give measured electric shocks to cats. Of the seven hundred, some seventy were able to pro-

*From Toman, J.E.P. and Goodman, L.S.: Anticonvulsants, *Physiological Reviews* 28:409, 1948.

tect the cats sufficiently to warrant further study. Of these seventy, the great majority had to be rejected because of toxicity or unpalatability. Only one compound, diphenylhydantoin sodium (Dilantin Sodium) was given extensive clinical trial. This was the case largely because the results with Dilantin were so rewarding that other drugs were given only to individuals who did not respond to, or had toxic reactions to Dilantin. The latter, which includes ataxia, mystagmus, skin rashes and gastric distress, seems to have been much more common in the past than at the present time. Like other related hydantoins, Dilantin's efficacy is limited essentially to grand mal and psychomotor seizures in adequate dosage (0.3 to 0.6 gram per day); it will control completely or markedly reduce the incidence of seizures in 60 to 80 percent of patients newly introduced to therapy. There is some tendency to habituation to this drug and it may have to be given in increasing amounts over the years. The addition of another anticonvulsant such as phenobarbital in full dosage (0.1 to 0.3 gram per day) will considerably improve the efficacy of Dilantin.

Recognition of the efficacy of Dilantin intensified the study of the anticonvulsant properties of related compounds. Toman and Goodman[5] have recently reviewed the work of the past twelve years. They have shown that all the currently useful anticonvulsant agents can be regarded as derivatives of a common chemical nucleus. As the accompanying figure from their work indicates, these drugs fall into three groups; the barbiturates, the hydantoins, and the oxazolidine-2,4-diones. The table included in Figure I lists the significant members of these various groups as well as the forms of epilepsy in which they are effective.

It is quite difficult both from one's own experience and the data in the literature to evaluate the relative efficacy of these various compounds. The tendency to use well established drugs of low toxicity first and to reserve the relatively new drugs for cases which do not respond to the established agents prejudices the results of any general clinical experience in favor of one or another preferred drug. This is well illustrated in our experience at the Neurology Clinic in Charity Hospital. In our series, we have found that phenobarbital alone will control completely, or reduce by at least 50 percent the seizures in 86 percent of patients subjected to this regime. Dilantin alone is similarly effective in 71 percent of patients. The combination of phenobarbital and Dilantin, however, is effective, according to our criteria, in only 59 percent of cases. The obvious implication is that we supplement either Dilantin or phenobarbital only in cases in which we find either drug alone to be ineffective, that is the more difficult cases.

## IV

In view of this consideration it would obviously be misleading for one to attempt to rank the various anticonvulsants in the order of their efficacy. It may, however, be worthwhile to make a few comments both on the groups of drugs shown by Toman and Goodman, and on some of the various members of each group.

*Barbituric Acid derivatives.* It must first be emphasized that the mere fact that a drug is a derivative of the nucleus shown in Figure I does not make it a good anticonvulsant. This is especially strikingly demonstrated in the case of barbiturates. Quick acting drugs of this group are frequently used in electroencephalographic work to induce seizure patterns. The confusion of sedative and anticonvulsant properties is extremely common. The induction of sleep is not the proper technic for stopping a seizure. Indeed, many individuals have seizures only when asleep. A frequent error in emergency practice is to attempt to interrupt status epilepticus (the occurrence of repetitive seizures) with Sodium Amytal. This drug is a poor anticonvulsant.

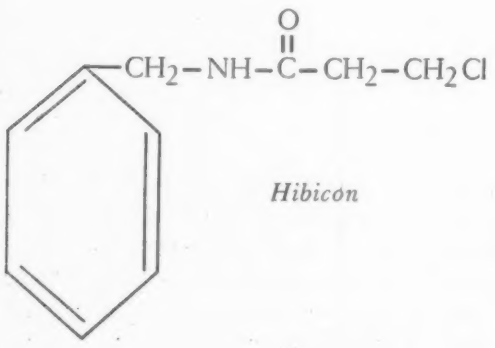
The clinically proven anticonvulsants in this group are phenobarbital and Mebaral. These drugs have the virtue of being relatively nontoxic agents with excellent anticonvulsant properties. Their major disadvantage lies in their sedative properties to which, however, most patients soon become habituated. These drugs are effective particularly in grand mal epilepsy. I would, however, disagree with Toman and Goodman in that I feel them also to be of value in psychomotor seizures. A recent barbiturate, not yet released for general use, is Geminal. I have had no first hand experience with this drug.

*Hydantoin derivatives.* There is little to be said about these drugs as a group. Dilantin has already been discussed above. Mesantoin, which stands in the same chemical relation to the hydantoin nucleus as Mebaral does to the barbital nucleus, is a drug of excellent anticonvulsant properties. It is said to be less toxic in general than Dilantin. In my experience, however, this has not been the case. In addition, it has several times been implicated

in the occurrence of agranulocytosis and in a few reported instances this has resulted in fatality. Carefully used, however, it is a valuable addition to the anticonvulsant armamentarium. I have had no personal experience with 5,5-phenylthienylhydantoin. It is reported, however,[6] to be a safer drug than Mesantoin in spite of considerably less anticonvulsant value. Nuvarone is as yet an experimental hydantoin. It is reported to be of value comparable to that of other members of this group.

Phenurone can be regarded as a derivative of hydantoin in which the ring has been opened at the 1,5 position. This drug is reported to be of value in all forms of epilepsy. It has, however, the disadvantage of quite common toxic manifestations. Most serious are aplastic anemia and psychic disturbances. The latter occurs in approximately 20 percent of patients and has occasionally led to suicide.

*Oxazolidine-2,4-dione.* Of particular interest in this group are Tridione and Paradione. These drugs have given newhope to sufferers with petit mal epilepsy for whom they at present are the most effective available agents. Prior to their introduction in 1946, petit mal could rarely be ameliorated by such agents as caffeine and amphetamine. Effective control of seizures was nearly unheard of. With these agents, effective therapy can be carried out in a high percentage of cases.




*Hibicon*

Hibicon is a recently prepared drug of particular interest both because it represents a departure from the basic structure outlined in Figure I, and because it has been observed to exert its maximal anticonvulsant effect in animals when given in the restricted dosage range of 25 to 35 mg. per kilo of body weight. Of remarkably low toxicity, we have given patients as much as 15 grams per day over a two week period with no untoward effects. The anticonvulant properties of this drug given either in maximal doses or at the level of 50 mg. per kilo of body weight have not seemed to us to be of the same order as those of the agents noted above.

## V

Certain other aspects of the medical management of epilepsy present recurring problems to the physician dealing with this syndrome. Patients suffering from this condition are the object of much ignorant prejudice and discrimination. They are marked out by their fellow men, treated with little consideration, and not uncommonly with out and out brutality. Suffering as they do with a disorder of brain function, such treatment which obviously is perceived, remembered and thought about in the brain, inevitably aggravates their tendency to seizures and increases the frequency of attacks. Psychiatric help thus becomes a necessary part of the treatment of epilepsy.

Among the sedatives which have been found to aggravate epilepsy, none is more effective than alcohol. Thus it becomes the problem of the physician to persuade his patient to give up this form of pleasant escape from his problem.

Beyond this, the patient with epilepsy is dogged by concern about his ability to work and his fear that to marry and raise a family is to perpetuate his curse. Concerning the former problem, we advise the patient to seek employment in relatively safe places, away from moving machinery and unprotected heights. Concerning the latter, we point out that while it is true that epilepsy is more frequent in the children of epileptics (1 in 40) than in the general population (1 in 200), many extremely useful and outstanding people have suffered with seizures. Epilepsy is neither a hopeless nor an untreatable disease.

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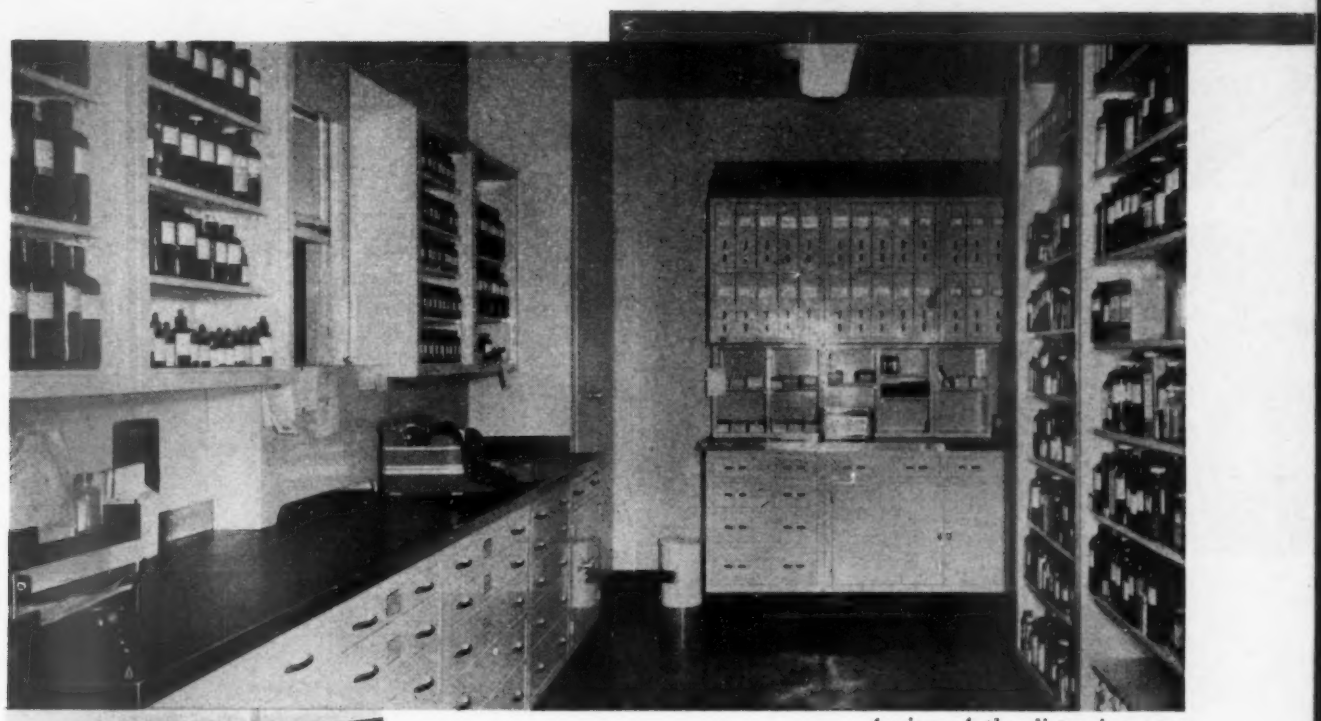


*A view of the dispensing area*

## *in Boston*

## *the hospital pharmacy*

## *of*

# BETH ISRAEL

ALFRED A. ROSENBERG, *Chief Pharmacist*

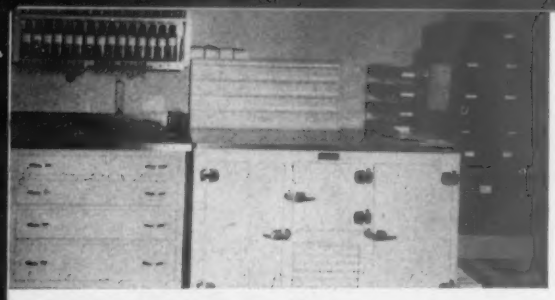
The Beth Israel is a general, non-profit hospital, located in the heart of Boston's famous Medical Center. With the completion of the new building program in March 1950, we now have a total of 363 beds and 90 bassinets. Adjoining the hospital is the Outpatient Building and the Yamins Research Laboratories. In keeping with the modern concept of improved hospital care, which not only provides for the care of the sick, but also embraces teaching and research, we are affiliated with Harvard and Tufts Medical Schools.

The Pharmacy consists of two units; a Pharmacy in the new wing, and a Dispensary in the Outpatient Building. This was necessary due to the fact that no space was available in the Outpatient Department to enlarge the Pharmacy. Also since the new Pharmacy was to be located in the new wing—quite distant from the Outpatient Unit—a Dispensary was necessary to provide service for outpatients.

Adjacent to the main Pharmacy are Stores and Receiving, and Central Supply. This location has profited immeasurably all concerned, since the three departments cooperate splendidly in sharing facilities and in the exchange of ideas.

The main Pharmacy consists of an office which measures ten feet by twelve feet and a small, specially constructed laboratory room, nine feet by five feet which is used for the preparation of special solutions, sterile narcotic vials, sterile vials of procaine hydrochloride, extemporaneous sterile solutions, and collyria.

The dispensing, prepackaging, and manufacturing area is thirty-five feet by thirty feet. Behind this area is a fire-proof storage room, thirty feet by nine feet, which houses inflammables, tax-free alcohol, and general stock. Our inflam-



mable tax-free alcohol room is provided with a specially constructed door, a vented window, a pitched floor with two drains in the center, and a burglar alarm. Below this area is a stock room, eighteen feet by thirty feet, for heavy items, bottles, and records.

The plans were designed with an eye to efficient operation, personnel comfort, and with the idea of lessening fatigue due to poor physical arrangement of fixtures and stock. For example—the height and width of our counters, thirty-six inches high and thirty inches wide, are such that personnel can stand or sit, and work comfortably. Shelving is metal, with adjustable shelves to conserve space. Stretching, stooping, and walking have been reduced to a minimum. Sinks and refrigeration units are located in convenient spots. A long work counter is illuminated by the light streaming through three large windows. Rows of fluorescent lights provide maximum lighting elsewhere. Gas, electrical, air and vacuum outlets, are conveniently located throughout the Pharmacy.

The asphalt tile which covers the floor is not only a blessing to tired feet, but very easy to keep clean. Drains are located strategically throughout the floor of the Pharmacy. As a housekeeping suggestion, any area which may be spotted by splashing, should be tiled so that it may be washed down easily.

## SERVICE IS OUR KEYNOTE

Service is the keynote of the Pharmacy at Beth Israel. All personnel are orientated with this philosophy being stressed. This has resulted in what I believe is a most pleasant relationship between the Pharmacy Department and all other departments in the hospital. The Pharmacy has been organized with the idea uppermost that it is an integral part of the hospital organizational setup. Therefore any department from Housekeeping or Dietary to Research, is free to consult with, and to expect pharmaceutical or related aid. This being the case, one can easily visualize the wide scope of the service we render.

A few functions of the Pharmacy which one finds perhaps only in a teaching hospital, are as follows:

A. Control of investigational drugs.
B. Purchases of chemicals and reagents for research laboratories.
C. Preparation of special solutions, not available commercially for clinical use.

Our personnel consists of a chief pharmacist, three staff pharmacists, a clerk-typist, a pharmacist's assistant, and a general helper. Every employee is given a job description when hired, but versatility is demanded so that in case of illness, vacation or other absence, a rearrangement of duties can be made.

The chief pharmacist's duties are administrative. These include the purchasing of all pharmaceuticals, drugs and chemicals, etc., serving as secretary of the Pharmacy Committee, the supervision and training of personnel, and developing new formulas and procedures. When any of the personnel is absent, on vacation, or being trained, the chief pharmacist goes "into the field" and works the vacant position or with the trainee. This provides an excellent opportunity for evaluation and constructive suggestions.

## SPECIAL FEATURES

I will attempt to mention only those points in which, I believe, we may differ from most hospitals; otherwise we practice pharmacy "over and above" the minimum standards.

Local detail men are seen by appointment once or twice a month; others when they are in the vicinity of the hospital. We realize the value of these professional representatives, but the appointment schedule became necessary with the expansion of the detail force of most companies. If any item of interest presents itself between appointments, the detail man feels free to contact the Pharmacy. We ask the detail man to consider his call as he would a physician's detail; conserving his time and ours. Purchases are made only on accepted products and on bid.

Since administration of medication is such an important function of nursing, the educational director of the School of Nursing is now one of the members of the Pharmacy Committee. This innovation has proven a big help in ironing out differences, in disseminating information, and in promulgating new policies.

The Pharmacy is open daily from 8 A.M. to 5 P.M.; Sundays and holidays a skeleton crew fills special medications only, from 8 A.M. to 12 Noon. A special cabinet with emergency drugs is located in the Nursing School Office for night use. Also the Emergency Ward carries, in addition to floor stock, many commonly used medications in very small quantities.

On each nursing unit, in addition to floor stock, for which there is no charge, there are some expensive ampuls, and items such as Gelfoam which are replaced on receipt of a special medication charge slip. Practically speaking, the loss of revenue on these items is negligible. Two pharmacists are always on call twenty-four hours.

Drug baskets are picked up with requisitions and special medications orders at 8 A.M. and delivered by 10 A.M. by our general helper. Having the pharmacy pick up and deliver the baskets results in getting all the baskets down at once and obviously creating an opportunity for rendering much better service, more efficient use of personnel, eliminates frequent telephone calls, allows for a planned schedule for Pharmacy and Nursing, and eliminates storage space for baskets, which usuallly would lie around until the early afternoon, if not delivered. The baskets are picked up on a two-tier truck and remain on the truck, eliminating extra handling and allowing for easier checking of contents of the baskets than when they were formerly placed on the floor.

## OUTPATIENT UNIT

The outpatient unit opens at 10 A.M., which allows for maximum help in the main Pharmacy until that time. Since all outpatient clinics are over by 4 P.M., the outpatient unit closes at 4:30 P.M.

In the outpatient unit one pharmacist handles an average of 120 prescriptions daily. About 85 percent of the prescriptions filled are prepackaged in the main pharmacy and are formulary items. During the busy hours a second pharmacist may be called upon to assist. We are trying to eliminate the use of numbers only on outpatient prescriptions for many obvious reasons of safety.

A study revealed that eight drugs produced 70 percent of the Pharmacy income. Therefore a perpetual inventory was instituted on these items. This list remains rather constant but is subject to revision every six months as the trend of therapy changes.

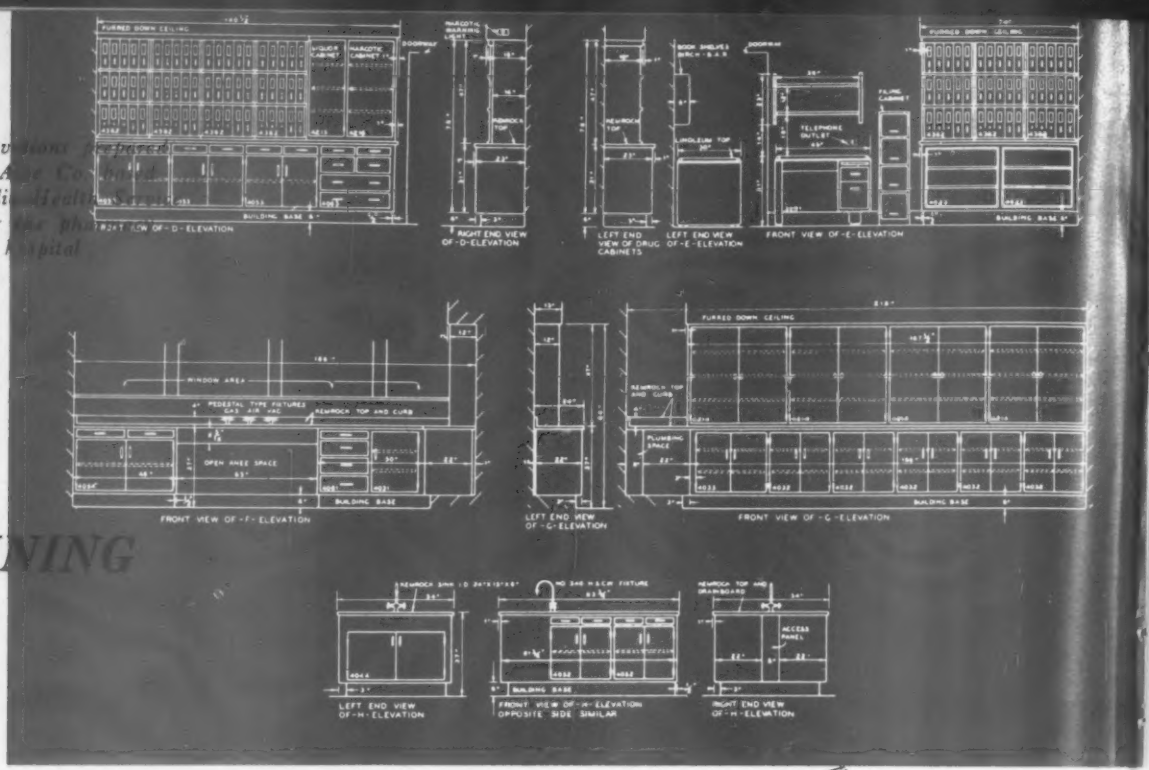
Twice a month intradepartmental meetings are held, at which time policies are discussed. Emphasis is placed on the necessity for maintaining a proper feeling of professional pride in our work and in our pharmacy.

If any pharmacist is desirous of complete details about any piece of equipment, forms, or procedures, I will be very happy to answer such questions.

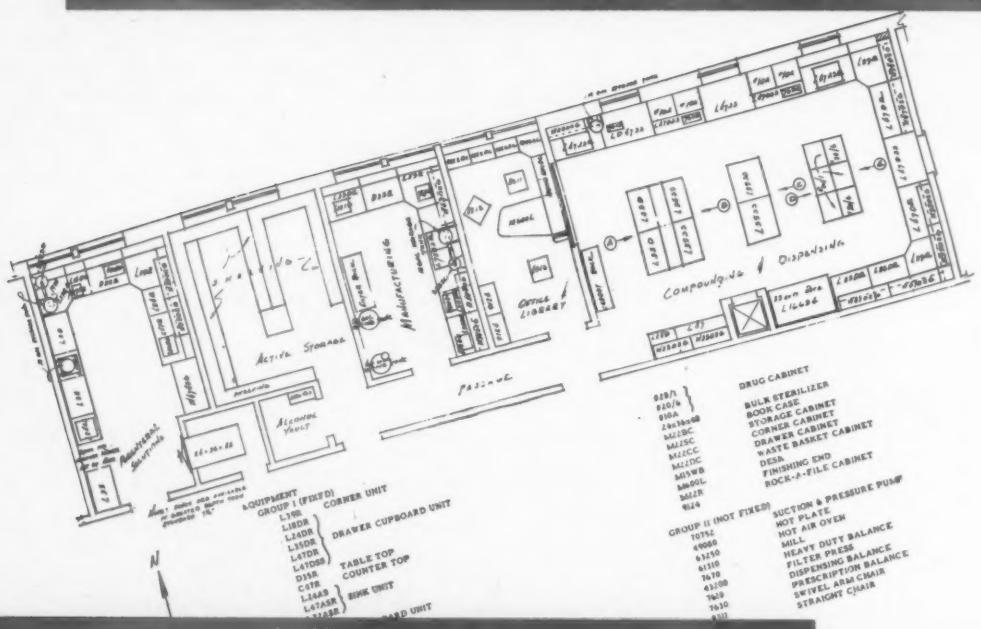
There is still much to be done, but much progress has been made and we wish to thank the hospital administration and the Pharmacy staff for their wonderful cooperation and assistance. The splendid spirit of cooperation and free exchange of ideas among the hospital pharmacists in this area and throughout the country, have been important factors in the elevation of this hospital Pharmacy.

*Five gallon stock solution area — with water still at the rear.*

*Equipment elevations prepared by the A. S. Aloe Co. upon the Public Health floor plans for the pharmacy in a 200 bed hospital*



# PLANNING



# PLANNING

# PLANNING

## and equipping a sterile solution laboratory

*By* ALEX M. MILNE *and* GUY H. TRIMBLE

I have chosen to limit this discussion for two reasons: First; a complete study would require a very comprehensive paper, and secondly; it would be presumptious of me in the presence of Messrs. Purdum, Phillips, and Lauve, who have had many years of experience in this field. Instead I will discuss three of the *special* problems which you encounter in existing hospitals, and which we see carried over in new hospital plans. Location, arrangement, and selection of built-in equipment present particular problems.

ALEX M. MILNE is pharmacy specialist, and GUY H. TRIMBLE, chief, Equipment and Supply Section, Division of Hospital Facilities, Public Health Service, Washington, D. C.

Presented at the Seventh Institute on Hospital Pharmacy, New Orleans, La., June 11-15, 1951.

**LOCATION**

When the "Solution Room" is located in the central sterilizing and supply department of a new hospital plan, we review the equipment with mixed feelings.

The sterile solutions laboratory, you will recall, is included in the "Suggested Hospital Pharmacy Plans" prepared by the Public Health Service. The hospital may contemplate having the pharmacist supervise the preparation and sterilization of parenteral solutions in the central sterilizing and supply department, or it may place the central sterilization and supply department under the control of the chief pharmacist, as found in the organizational plan of a number of hospitals. Some small hospitals have avoided duplication of equipment by locating the sterile solutions unit

*Continued on Page 426*

# *steps in* PLANNING

## *the physical layout and equipment of the hospital pharmacy*

*By* ALEX M. MILNE *and* GUY H. TRIMBLE

Two previous articles in this series published in THE BULLETIN, have been concerned mainly with the design and equipment of pharmacies in general hospitals up to 200 beds.[1]

I would like to talk awhile on how you can use your knowledge to realize your aims as pharmacy consultants in the planning of pharmacies in new hospitals or remodelling pharmacies in existing hospitals.

In the Division of Hospital Facilities of the Public Health Service, all of us have the same goal—better hospital care for patients. We are all working in the same direction—using different approaches. The physician and administrator use their knowledge of medicine and administration, the architect and engineers think in terms of buildings and equipment to achieve this goal.

Presented at the Seventh Institute on Hospital Pharmacy, New Orleans, La., June 11-15, 1951.

It is clear that everyone's job in hospital planning is interrelated. For example, the architects and engineers cannot design good pharmacies or good hospitals unless they know how the hospital functions. They will look to the pharmacist to assist them in planning the pharmaceutical service. He in turn can help effectively, only if he understands their problems and the limitations of brick, mortar and dollars.

At the risk of sounding pedantic, I would say that the key to successful consultation is not only to know your own field, but know and understand the viewpoint of the other people in hospital planning and operation. Who are these people?

For the pharmacy consultant they are the Build-

ing Committee and trustees, the architect and engineer, the State Hospital Program director, equipment dealers and manufacturers, and the hospital administrator. You must interpret your knowledge to them. Modify the pharmaceutical service to fit the needs of the new hospital. Sell yourself and your service. None of us should be so complacent or feel so secure that we fail to do this.

In the past three years Don Francke has editorialized in THE BULLETIN the need for pharmacy consultation in the hospitals being built under the Hill-Burton Program. All of us connected with this program can speak of many needs.

I would like to underscore this statement by telling you of what can and does happen in hospital planning when adequate consultation is not available. These are things seen in the course of our work, and we in the Division of Hospital Facilities have a unique opportunity to review many plans and equipment lists from every section of the country and to observe some of these hospitals in operation.

So far as we can determine from blueprints and equipment lists, such basic and elementary decisions as personnel and scope of the pharmacy department are often lacking. There is rarely a written program setting forth the pharmaceutical service proposed for the new hospital. Failure to plan realistically is evident in blueprints showing an adequate pharmacy area but underequipped. We see insufficient cabinets, counters, shelves and sinks, all poorly arranged, which indicates little knowledge of the functions to be performed at these units. There is a noticeable tendency to select fixture equipment that may be suitable for other departments of the hospital but grossly unsuited for the pharmacy. We see manufacturing laboratories that show but a central table and sink unit and no other equipment. One could ask, what is to be done in this generous space and with what?

There are a number of reasons for these situations. It is not wilful negligence on the part of any one. When you stop to consider that there are over 1,500 projects under way, and further realize this represents almost the same number of individual architects and communities, you begin to appreciate the complexity of the job.

Some of the difficulty arises from the architect's unfamiliarity with the function and operation of the pharmacy department. This is not intended as a reflection on the architectural profession in any manner. We are sure that most of the architects breed short tempers and make tasks needlessly are as conscious of the problem as we.

Where is the architect to find simple authori-



*Fixtures by Gutmann Store Fixture Co., Chicago, Ill.*
ABOVE: *Silver Cross Hospital, Joliet, Ill.,* RIGHT: *Borgess Hospital, Kalamazoo, Mich.*

tative and modern material to use as a guide? He would certainly welcome any assistance or guidance offered. Recruiting a staff of experts and consultants to help him is an even greater problem or perhaps an impossibility. Undoubtedly he is laboring under real handicaps. Other problems are created because the community never had a hospital before and the well-meaning, civic-minded planning committee has no idea how to proceed or what is needed. But enough of the problem—it will be more rewarding to discuss how to solve it, how to marshall together the information at your command to assist in planning better pharmacy facilities.

*What* should logically be considered in planning pharmaceutical facilities? Apart from its patients and its facilities, your hospital—any hospital, consists of men and women. The ability of these men and women to serve the needs of the patients effectively, promptly and with assurance, is greatly dependent on the facilities provided. That being true, then the adequacy, convenience and efficiency of the facilities are so important as to call for the best of planning and the most careful selection of equipment.

The ten "check-points" which follow provide a framework to assure that nothing basic will be ignored or forgotten in your deliberations on pharmacy planning and equipping. May we here stress a point which the members of this group may feel a natural reluctance to bring up? We refer to the human equation on your side—you and your staff people. By all means, let your steps and theirs be saved wherever possible. Let energies be conserved and safety made certain. Let your patience and theirs be spared as many irritations as thoughtful planning can avoid, being mindful of the fact that small and recurrent annoyances distract one's attention, destroy concentration, and make tasks needlessly onerous.

**PURPOSE**

Only from study and analysis of the specific work to be accomplished—the pharmaceutical service expected—can a well rounded program be derived. The functions to be performed in and by means of the pharmacy obviously should be set down in meticulous detail, for these data will govern literally scores of decisions. For example, if utmost efficiency is to be assured, the floor space of each major piece of equipment must be known and located in proper relationship to other units. Cardboard templates, with a scale of ¼ inch equalling one foot, are useful for this purpose. Require-

ments for the various procedures contemplated, are variables which are determined only through knowing and studying the purpose of the whole installation.

### SCOPE

Here is a decision wherein foresight can be a source of enduring satisfaction. The initial scope of the pharmacy function may be vastly changed by reason of the inevitable progress of science. New drugs and new practices are to be expected. Pharmaceutical manufacturing functions and activities not originally contemplated are often added later, as for example, parenteral solutions, which demands additional facilities. Simple prudence would seem to call for a reasonable provision for future expansion, even though such provision may merely involve deciding where the room for such expansion is going to come from. So let our list of "things to consider" include, by all means, the probability of widening the physical scope of the pharmacy in step with the expansion of scientific knowledge.

### CAPACITY

Although floor area, admittedly can never be considered a really accurate measure of the pharmacy capacity, it does furnish a useful basis for estimating requirements quickly.

### PROVISION FOR FUTURE EXPANSION

Steady growth of a well-conducted hospital is almost a certainty. Hence, it is wise to take into consideration the future expansion of the pharmacy to keep pace with an increasing patient load. Thought may be given to the placement of the pharmacy adjacent to other facilities which can be converted later to pharmaceutical purposes. If this is done, future expansion need never be a perplexing problem.

### CONVENIENCE

The elimination of needless drudgery and the promotion of maximum efficiency of pharmacy personnel calls for convenience, planned into the whole pharmacy installation. Although a well planned traffic flow accomplishes much in this direction, a careful study should also be made of the routine daily procedures at the various work sections. Such things as the proper height of a counter, the logical location of different storage cabinets, the most efficient stock arrangement, the provision and placement of mechanical equipment are matters that deserve a far better basis of decision than whim or guesswork. All of these and many other similar considerations contribute greatly to minimizing fatigue. In the interest of alertness, and of high morale, these small things should never be casually treated.

### TRAFFIC FLOW

A master traffic plan, coordinating the activities of the entire institution is generally regarded as a "must"—a prerequisite—in the planning of a modern hospital. To fit properly into such a master plan, the pharmacy should be arranged and located in a sensible sequence of units according to their relative functions, around a central hub of material and equipment storage—all of this, of course, within easy range of the necessary direction and supervision. Such groupings may properly be designated as Unit Traffic Plans.

The Unit Traffic Plan can be, and ought always to be, coordinated with the master plan, so that the end-product is delivered as near as possible to the place where the end-product is most commonly wanted—this with the minimum of time, trouble and physical effort.

### POWER REQUIREMENTS

The initial and the anticipated future load on power lines must be ascertained by the pharmacist from a listing of the various power equipment to be used. Such a listing, plus the lighting requirements, will enable the electrical engineer to decide the number of circuits and highly specialized current characteristics that will be needed to take care of present and future requirements.

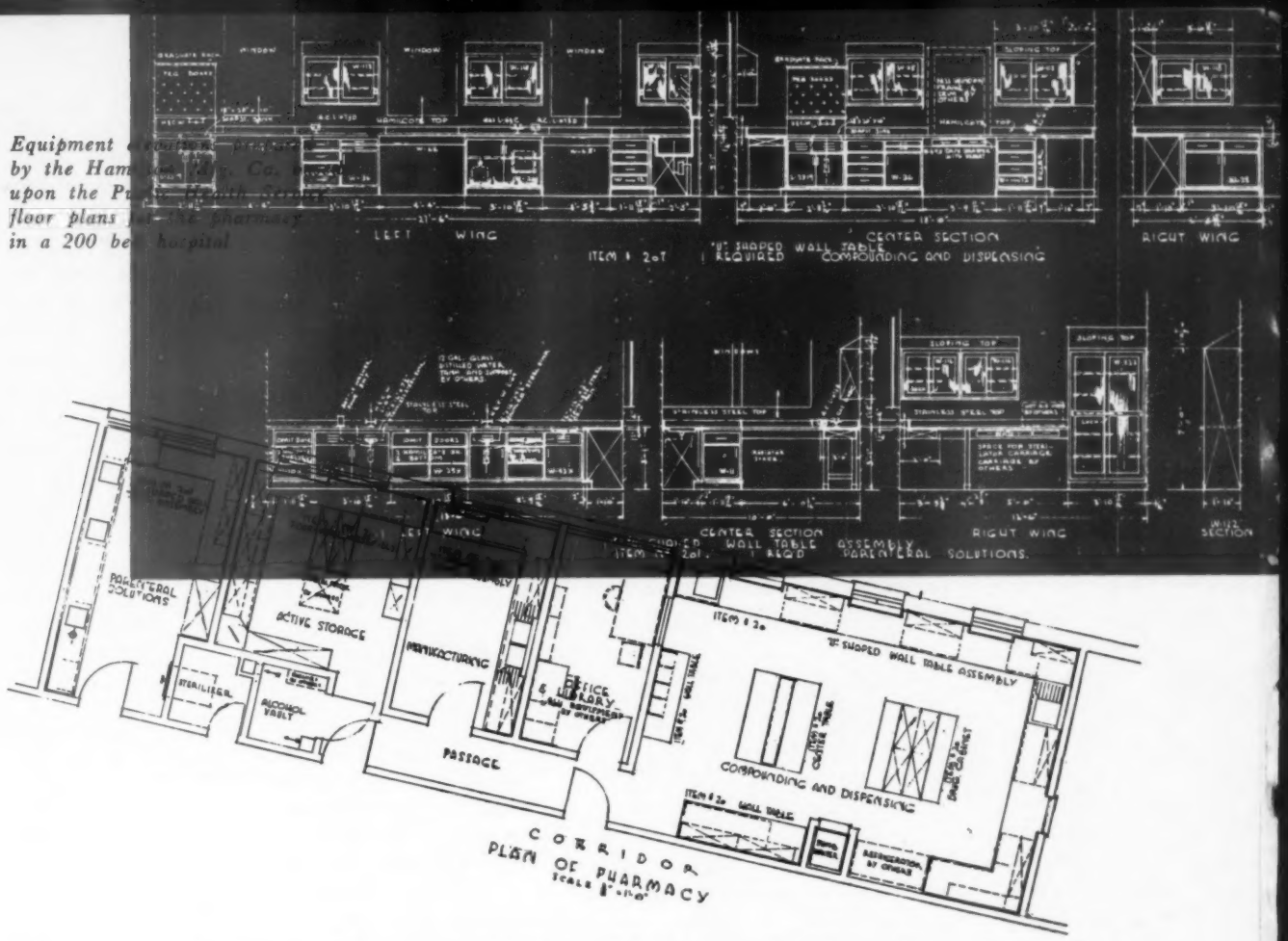
### STYLING

The use of non-porous sanitary materials or finishes in pharmacy casework permits a wide range of fast color combinations. Such color possibilities make pleasing harmonies possible and, when combined with clean, modern, functional design, the result makes for appreciably more efficient working conditions.

At the risk of being repetitive, we must mention the furniture and fixtures because they represent the largest share of the equipment cost of a new pharmacy.

Since a pharmacy fixture is a special purpose unit, to design and build it properly calls for basic knowledge of that special purpose. Such fixtures are available in standardized units from several manufacturers who specialize in pharmacy and laboratory casework. Their knowledge of what is needed, their experience in design requirements, make that fixture as nearly ideal for its use as possible.

The relative advantages of various cabinet materials—close grained hardwoods and steels—have special significance. In woods, for instance, the factors of strength, stability, resistance to decay, discoloration and the like, are most important. Likewise, in steels, characteristics of corrosion and acid-resistance, cleanliness and rigidity and heat




*Equipment [illegible] by the Ham[illegible] Co. [illegible] upon the P[illegible] floor plans [illegible] pharmacy in a 200 be[illegible] hospital*

resistance must be known. Counter and table working-top materials—wood and composition-wood, composition stone, and the wide diversity of stainless steel and inert alloys as well as the full range of synthesized compositions — should be thoroughly understood by the manufacturer who proposes to produce the most desirable fixture.

## COST

Assuredly, you want to get full dollar value from the money invested in pharmacy facilities. The foregoing suggestions and reminders have stressed several phases of the economies to be expected from selecting the standard unit of pharmacy fixture equipment. A great variety of such specialized units may be obtained, permitting such a diversity of arrangement as to meet virtually every ordinary demand of the average hospital pharmacy. In some instances these units can be factory modified to meet unusual specifications. The standard units, while forming a permanent installation, custom arranged to meet the individual hospital pharmacies needs, still permit an almost complete re-planning of the pharmacy, should the future so demand. Both initial and long range economy are apparent. One thing cannot be too strongly urged—that every contemplated deviation from accepted standard design be weighed well, to make certain that it stems from sound and valid reasons rather than whim or personal preference. The final utility, efficiency and cost of your pharmacy installation are determined, not only by the quality and design of the individual units of fixture equipment, but to a large degree also by the planning and arrangement.

## AVAILABLE SERVICES

1. Secure catalogs from the several manufacturers and make your selection of type and kind. Cut out the illustrations and mount on loose leaf pages to which may be added the specifications.

2. Call in your selected producer of pharmacy equipment before final specifications are drawn up.

3. Have the fixture equipment specifications for your project separated from the general building section of your architect's specifications.

4. Request competitive bids direct from the specialized pharmacy equipment producers, to permit placing separate contracts in the procurement of such equipment.

This procedure is quite likely to cost you less money than it would cost if you were to lump the pharmacy specifications in with the general building contracts; assuredly it will cost no more. And it is almost certain to assure you a better pharmacy for your money.

This discussion has been planned to direct your attention to some special problems of planning

and equipping hospital pharmacies; it has shifted the emphasis from subject matter commonly considered to be the sphere of the hospital pharmacist to consideration of attitudes and techniques necessary for pharmacy consultation. You have been asked to see pharmacy from a different viewpoint. We hope it will point the direction toward improved physical standards for hospital pharmacies.

#### CONCLUSION

There is only one other matter I should like to mention before completing the formal portion of this session. Then I shall be happy to answer any questions you care to ask me—to the extent of my ability. And I hope there will be questions because I feel no advances can be made without full discussion of the merits of taking the step forward.

We are fortunate today in having a wealth of literature on many aspects of hospital pharmacy which was not available a few years ago. The invaluable *Comprehensive Bibliography on Hospital Pharmacy* reveals many excellent contributions on planning and equipment which will be of assistance.

The Division of Hospital Facilities of the Public Health Service would also like you to be acquainted with the reprints of guide literature developed for the Hill-Burton Hospital Construction Program. Essentially, this literature is designed to assist architects, administrators and those engaged in hospital planning. We do not have to convert you. We also have a few slides of hospital pharmacy plans and casework elevation drawings[2] which we believe you may be interested in. Copies of the slides are available through the Division of Hospital Pharmacy of the American Pharmaceutical Association.

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   Milne, A. M. and Trimble, G. H.: Suggested Equipment Lists for Hospital Pharmacies, *Bull. Am. Soc. Hosp. Pharm.* 8:102 (Mar.-Apr.) 1951.
2. Examples based on U. S. Public Health Service plans are available from: A. S. Aloe, St. Louis, Mo.; Hamilton Manufacturing Company, Two Rivers, Wisc.; Kewaunee Manufacturing Company, Adrian, Mich. and Grand Rapids Store Equipment Company, Grand Rapids 2, Michigan.


## *the sterile solution laboratory*

*continued from page 421*

of the pharmacy adjacent to the central sterilizing and supply department with a connecting door. The pressure sterilizer, the hot air oven, and the dumbwaiters are used jointly by the two departments, thereby effecting a saving of several thousand dollars without loss of efficiency.

In another instance we have seen a parenteral solution laboratory in the pharmacy department of a 60-bed hospital plan. Two members of this building committee inquired about the necessary equipment and went on to explain that neither a hospital administrator nor a pharmacist was expected to be retained until the hospital was ready to open. Such planning is not sound, but it is difficult to persuade many lay boards of trustees to engage the administrator *early* in the planning stage of a project.

#### ARRANGEMENT OF EQUIPMENT

Assuredly, it is desirable to promote maximum efficiency in the functioning of the sterile solutions laboratory. In this regard a lesson may be learned from the industrial "production line." Of course, actual production line operations would neither be feasible nor desirable where the operations being conducted, must vary almost hourly. However, in the interest of general efficiency it is obviously most important that facilities be so arranged as to group specialized functions in logical sequence. The resulting convenience will promote a smooth traffic flow and prevent much lost motion and useless exertion.

After these determinations are made, for example, in the preparation of parenteral solutions, a written program should be prepared describing *who does what and where,* the personnel required, the sequence of procedures, and the major items of equipment required to perform the function. This program enables the architect who is planning a new hospital, to determine area requirements. Contrary to general opinion, good planning involves building a room around the equipment and function—not fitting the equipment into a predetermined area.

#### SELECTION OF BUILT-IN EQUIPMENT

Thoughtful consideration must be given to the selection and care of equipment to assure successful operation.

*The Still*: The first unit of any good parenteral solution technique is a good water still. It should be steam operated since steam is generally available in a hospital, and therefore more economical than one operated by gas or electricity.

The still should be of construction that will enable it to produce a distillate fulfilling official requirements. There are several models available with systems of baffle plates to trap impure steam. These produce a single distilled water meeting

these requirements. It is extremely important that the operator understand the maintenance of this particular piece of equipment, as it is necessary to clean it regularly to produce a distillate of constant purity.

Weeden B. Underwood, in his "Textbook of Sterilization," points out that the main cause for frequent reactions from parenteral solutions in the earlier days came from using distillate from dirty stills. He adds that water from a triple, but dirty still is potentially more dangerous than water from a single clean still.

The size of the still will depend upon the usages to which it will be put. If the still is to furnish water only for the preparation of parenteral solutions, then it should not be difficult to calculate its size; however, it is better to obtain a capacity too great than too small. There is also a trend to flasking saline solution, Ringer's solution, and/or sterile water for use in the operating rooms and delivery rooms in lieu of water sterilizers.

A 200-bed hospital will require approximately 122 liters *daily* for hot packs, irrigations, and hand basins. This is based on the 1950 American Hospital Association Report of approximately six births and twenty operations daily, and an average of seven liters per birth and four liters per operation.

*Distilled Water Checker*: Even though one may have confidence in the performance of a still, it is well to have a visible check upon it; therefore, a purity meter becomes a second part of the equipment.

*Sterilizer*: Any autoclave can be used in sterilizing solutions; but for new facilities a solution sterilizer should be considered. Such a sterilizer is of single wall construction and therefore minimizes the sterilization time. Square types are preferable to round ones because of the additional space for bottled fluids. Unless the sterilizer is sufficiently large much time will be spent in "watching it"; therefore in size, it is well to lean to the generous side; the difference in cost is slight.

*Counters, Cabinets, Sinks*: Many existing sterile solution laboratories have been equipped at very nominal cost. Ingenious pharmacists, with the cooperation of the hospital engineer, have done wonders with salvaged counters, cabinets, and sinks. But down the corridor one is apt to find a kitchen, or utility room with stainless steel equipment?

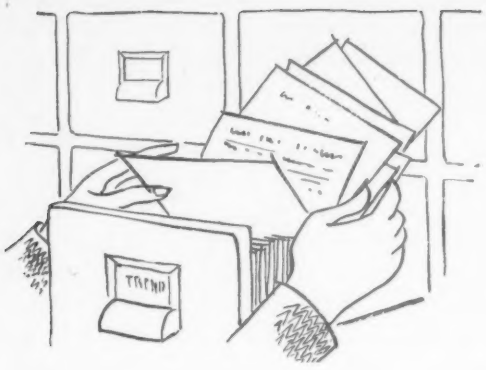
If funds permit it is ideal to have corrosion-resistant metal in these and other areas, particularly in the sterile solution laboratory, where cleanliness is of paramount importance. Corrosion-resistant metal counters, cabinets, shelves, and sinks, if made of good quality, will last nearly the life of the building, and are easy to maintain. The cost of such is a relatively small part of the overall casework contract.

The built-in items; stills, sterilizer, and casework, account for the largest percentage of the equipment cost for the sterile solution laboratory of a new hospital.

**CONCLUSION**

If we have to accept less than the best, because of dollar limitations, at least let us build better than the past.

*Fixtures by Gutmann Store Fixture Co., Chicago, Ill.* TOP: *Mercy Hospital, Hamilton, Ohio;* CENTER: *Augustana Hospital Chicago, Ill.;* BELOW: *Massillon City Hospital, Massillon, Ohio.*




# THERAPEUTIC TRENDS

*New trends in medicine and pharmacy include CORTISONE IN NARCOTIC ADDICTION—TREBURON—SILICOTE—NEOMYCIN IN OPHTHALMOLOGY—FAT EMULSIONS—POT. GLUCONATE IN HYPOPOTASSEMIA*

## CORTISONE IN NARCOTIC ADDICTION

A preliminary report on the use of Cortisone therapy in drug addiction appears in the *U. S. Armed Forces Medical Journal* 2:1347 (Sept.) 1951. Such therapy was suggested when it was noted that patients on the U.S.S. Consolation receiving oral Cortisone for the treatment of frostbite and burns showed psychic changes in the form of a feeling of well-being, increased self-confidence, an optimistic elated mood and an acceleration in the thinking and physical activities. This was coupled with a marked increase in appetite and fluid intake. As the psychic untoward effects of Cortisone therapy closely parallels the desired response of the drug addict, and because physiologic changes brought about by the drug might alter the abstinence symptoms, it was decided to institute Cortisone therapy on a drug addict.

Results of the treatment were encouraging in that there was complete relief of symptoms at the time it would normally be expected for the symptoms to be at their peak. The patient showed no mental depression during the ten days of post-treatment observation and there was no general malaise and his appetite remained good.

## NEW ANTICOAGULANT

Treburon is an anticoagulant having heparin-like activity, but having the advantage of being less toxic than heparin in acute and subacute tests. With a toxicity of about one-half that of heparin, the safety margin is at least one-half, and possibly equal to that of heparin. Its activity in human subjects is about one-third that of heparin and the compound is well tolerated. Treburon can be administered intravenously or intramuscularly. Like heparin, it is primarily an antithrombin substance, and it can be neutralized by protamine sulfate. It has only a slight effect on prothrombin time and does not affect platelets, fibrinogen or sedimentation rates. In subacute toxicity tests, repeated administration of Treburon did not adversely affect the growth and the blood picture and did not produce spontaneous hemorrhages.

Chemically, Treburon is the sodium salt of sulfated polygalacturonic acid methyl ester methyl glycoside. Also designated as Ro 2-3053, Treburon is a product of Hoffmann-La Roche Inc. The early studies were reported at the 1950 fall meeting of the American Society for Pharmacology and Experimental Therapeutics and published in the *J. Pharmacol. Exp. Therap. 102*:156 (July) 1951.

## SILICOTE AS A SKIN PROTECTANT

Silicote, a silicone product of the Silicote Corporation of Oshkosh, Wis., has been used experimentally as a skin protectant with success. Since silicone agents possess the properties of chemical inertness, adhesiveness and the ability to repel moisture on topical application, it was believed that they should be useful in medicine where protection against the sequelae of constant moisture has been sought. The work was carried out at the Departments of Medicine, Surgery and Dermatology and Syphilology at the University of Wisconsin Medical School, and reported in the *J. Investigative Dermatol. 17*:125 (Sept.) 1951.

Toxicological studies using silicones on laboratory animals show low toxicity. There was little or no untoward reactions when administered by mouth (up to two percent of body weight) inhaled (as high as 4,000 parts per million), or applied to the skin.

Silicote is composed of thirty-percent DC-200 (Dow-Corning 200 centistoke viscosity) silicone oils in a petrolatum base. It may be applied like an ointment to macerated, non-weeping areas, in a thin coat and is not removed before applying a new coat in four to eight hours. It was found advantageous to allow the Silicote to remain and advisable not to try to remove it. At least three soap and water scrubbings would be required to

obliterate visible protective action of the preparation if such became necessary. However, this was never required. Ether, alcohol, benzene and acetone have no effect clinically on the protective action of Silicote.

This form of treatment using Silicote was effective in the management of 58 out of 61 dermatological conditions like diaper rash, irritation from colostomies, intertrigo, decubitus ulcers and others in which protection from moisture was indicated. Many of the cases treated had failed to respond to currently acceptable and recommended forms of therapy such as aluminum powder, aluminum paste, zinc oxide ointment, gentian violet (two percent to five percent aqueous), tincture of benzoin compound, anti-histaminic creams, protective creams, calamine and other "shake" lotions. Current studies are being carried out using silicones of various viscosities in bases other than petrolatum, such as Aquaphor, Jelene and Multi-Base.

**NEOMYCIN IN OPHTHALMOLOGY**

Local use of Neomycin in ophthalmology was studied to determine the ocular-tissue tolerance for Neomycin and also its ability to penetrate into the anterior chamber when instilled into the cul-de-sac. Results of the studies on rabbits and humans are reported in the *Am. J. Ophthalmology 34*:1357 (Oct.) 1951.

The experimental work which was carried out at the Wills Eye Hospital and the Harrison Department of Surgical Research, University of Pennsylvania, shows that Neomycin in concentrations up to 40 mg./cc. (5,000 units/cc.) may be safely employed for drop instillation into the eye. Concentrations up to 40 mg./cc. did not interfere with epithelial regeneration of the rabbit cornea, and the solution will penetrate into the anterior chamber of the normal rabbit eye when instilled as drops. Penetration is increased in the presence of of abraded corneas. It was also found that Neomycin solution, 2.5 mg./cc. may be safely injected into the anterior and vitreous chambers of rabbit eyes. Higher concentrations may result in damage to the corneal endothelium, permeability of vascular structures of the anterior segment, lens, and retinal vascular system.

**FAT EMULSIONS FOR ORAL NUTRITION**

An oral emulsion of concentrated supplementary calories produced significant weight gains in a majority of subjects according to a report in *J. Am. Diet Assoc. 27*:197 (March) 1951. Emulsions of 40 percent peanut oil and 10 percent dextrose with caloric value of four per ml. were given to 141 human subjects in need of extra calories. The authors conclude that fat emulsions should prove to be extremely useful for the oral administration of concentrated supplementary calories.

The emulsions were reasonably palatable and were on the whole well tolerated. They were readily accepted as dietary supplements by healthy adults and by patients hospitalized for a wide variety of illnesses of an acute and chronic nature.

Of 33 unselected normal adults in need of extra calories, 25 tolerated large amounts of the emulsions easily and demonstrated a weight gain varying from one to 11.5 pounds in periods of study ranging from 5 to 63 days. The average rate of gain observed in this group was 0.1 pound per day for an average ingestion of 0.1 pound of fat per day from the emulsion.

Of 98 unselected patients in need of extra calories, 73 easily tolerated large amounts of the emulsion administered by mouth or tube, and displayed weight gain varying from 1 to 22 pounds in periods of study ranging from 5 to 150 days. The average rate of gain observed was 0.2 pound per day for an average ingestion of 0.1 pound of fat per day derived from the emulsion.

**POTASSIUM GLUCONATE IN HYPOPOTASSEMIA**

Potassium gluconate, as a source of potassium in hypopotassemia, appears to bring about satisfactory results. Prompt administration of potassium is extremely beneficial when insufficiency of this salt has been shown to exist as in diabetic acidosis, infantile diarrhea and after major surgical operations. A report in *Science 113*:751 (June 29) 1951, outlines the method of preparing a parenteral solution of potassium gluconate and states that such a preparation has been used in the surgical and medical wards at Lenox Hill Hospital in New York City for the past six months with excellent results.

Potassium gluconate may be given either orally or parenterally. When given orally, it has been shown that the gluconate seems to be less irritating than the chloride, and is well tolerated. One gram of potassium gluconate is equivalent to 167 milligrams or 4.2 milliequivalents of potassium.

According to this report, a 30 percent solution of potassium gluconate may be prepared with pyrogen-free triple-distilled water, filtered through a fritted Pyrex glass disk, transferred to 20 ml. size ampules, and autoclaved. Twenty ml. of this solution contains one gram of potassium (25.5 milliequivalents). The solution has a *p*H of 7.0 and is colorless and stable. It may be added to the usual parenteral infusion mixtures. Although the usual source of potassium for both oral and parenteral administration has been potassium chloride, the gluconate is the solution of choice when the chloride ion is undesirable.

# TIMELY DRUGS

**AMMIVIN . . .** the National Drug Company's name for pure khellin, is now available in 10 mg. enteric coated tablets providing greater flexibility of dosage. Since Ammivin has a cumulative effect and is excreted slowly, therapeutic benefits are not apparent until optimum tissue saturation is obtained. Ammivin permits extremely flexible dosage. Both the dosage and mode of administration should be adjusted to the needs of the individual patient. Rapid saturation is desirable for prompt clinical results. For this purpose the average dose is 60 to 160 mg. per day in divided doses, until desired clinical response is obtained. Thereafter, improvement may be maintained with 20 to 100 mg. daily for as long as necessary. For the patient who may complain of nausea, start with a test dose of 20 to 40 mg. per day in small divided doses. This dose should be increased gradually according to the tolerance of the patient up to 60 to 160 mg. per day.

* * *

**ANTOSEN . . .** is a new sedative cough syrup available from E. R. Squibb and Sons. It is intended to relieve coughs due to common colds or associated respiratory infections when a combined anti- secretary-sedative effect is desired. Antosen has a soothing action which does not produce excessive drowsiness. It contains in each fluid ounce, prophenpyridamine, 25 mg., codeine phosphate, 65 mg. and alcohol, five percent, in a pleasant tasting fruit flavored syrup.

* * *

**AUREOMYCIN SURGICAL POWDER . . .** for topical application as an adjunct to surgery, was recently announced by Lederle Laboratories. The surgical powder is designed for use where local antibiotic treatment is desired. It is indicated for its action against organisms commonly causing wound infections. Clinical experience suggests that its application to a potentially infected area may materially decrease the incidence and severity of infectious complications.

Aureomycin Surgical Powder consists of one gram of Aureomycin Hydrochloride Crystalline in a special base. The powder is packaged in five gram vials with a convenient shaker top.

* * *

**BEPLETE . . .** is a combination of elixir vitamin B complex, phenobarbital and belladonna, available from Wyeth, Inc. Among the indications for using Beplete are mucous colitis, nonspecific ulcerative colitis, spastic constipation, flatulence, cystitis, urethritis and nervous indigestion. The recommended dosage is one to two teaspoonfuls before meals and at bedtime.

* * *

**COMPENAMINE . . .** is Commercial Solvents' name for a new repository form of pencillin known generically as *1*-ephenamine penicillin G. The advantage of this form is the fact that it virtually eliminates the incidence of allergic reactions. In the clinical investigation of over 2,000 cases, this new type of penicillin salt decreased the incidence of reactions to less than one percent. Its administration to patients with known sensitivities to penicillin G or procaine penicillin G has shown only a low rate of reaction. Where reactions do occur, it is usually not necessary to discontinue penicillin therapy with Compenamine because the reactions are minimal in nature. Clinically, this new preparation is equally effective as procaine penicillin G.

Compenamine is available in aqueous and oil suspensions for parenteral use.

* * *

**CUMOPYRIN . . .** Abbott's name for Cyclocumarol, is a new synthetic anticoagulant for oral use. Its chemical structure is 3,4-(2′-methyl-2′methoxy-4′-phenyl)-dihydropyranocoumarin. It is chemically related to Dicumarol and produces its therapeutic effect by lowering the blood prothrombin activity.

Cumpyrin, which is two to three times as potent as Dicumarol, has certain advantages—action of a given dose is more predictable; it is easier to maintain the desired prothrombin level; onset of action is more rapid; effect is more prolonged; there is

less capillary toxicity; little or no gastrointestinal disturbance; and patients resistant to Dicumarol effect are often less resistant to Cumapyrin effect. The initial dose is 100 to 200 mg., depending on the size and condition of the patient. Subsequent doses, 12.5 to 50 mg. should be given daily, or as required. Onset of effect generally occurs in about 24 hours or less. After the patient's reaction to the drug is known, determinations of prothrombin activity may be made at intervals of five to seven days.

* * *

**DECHOLIN WITH BELLADONNA . . .** a combination for treating functional gastrointestinal distress, is available from the Ames Company, Elkhart, Ind. The spasmolytic action of Decholin with Belladonna relieves the pain of smooth muscle spasm, suppresses incoordinate peristaltic waves and facilitates biliary and pancreatic drainage through relaxation of the sphincter of Oddi. Hydrocholeresis with Decholin flushes the biliary tract with a copious flow of thin, free-flowing bile, improves hepatic arterial blood flow and produces mild natural laxation without catharsis. Decholin with Belladonna is administered in a dosage of one or two tablets three times daily after meals.

* * *

**DORMISON . . .** is a non-barbiturate hypnotic available from Schering Corporation. It is indicated in simple insomnia where severe pain or agitated psychotic states do not co-exist. Dormison, also known as methylparafynol (3-methyl-pentyne-ol-3), is said to have the following advantages; free from habit-forming properties of barbiturates; rapidly metabolized; no cumulative action; no toxic effects on prolonged use; and it has no prolonged suppressive effect.

Dormison has demonstrated outstanding freedom from toxic reactions. Daily administration of recommended doses to human beings for more than five months has produced no undesirable side effects. The recommended dosage is one to two capsules (250-500 mg.) taken just before patient is ready for sleep.

* * *

**ENGRAN, RUBAGRAN, RUBRAMIN SOLUBLE TABLETS AND RULIVAN . . .** are names given to four new nutritional products recently announced by E. R. Squibb and Sons.

Engran is a vitamin mineral supplement which offers protective amounts of the vitamins and minerals considered useful as a dietary supplement in pregnancy.

Rubragran is a high potency oral hematinic. It supplies vitamin $B_{12}$, folic acid, vitamin C, iron and liver and it is intended as a prompt therapeutic agent for all macrocytic and microcytic anemias amenable to oral therapy.

Rubramin Soluble tablets is a preparation to facilitate $B_{12}$ therapy in children. Rubramin tablets dissolve in a teaspoonful of water and are virtually tasteless. They are intended to aid in the promotion of growth in chronically ill or malnourished children.

Rulivan supplies both liver injection and vitamin $B_{12}$ in a single intramuscular preparation. Rulivan is intended to aid in the therapy of pernicious anemia, sprue and certain other types of macrocytic anemia. Each cc. of Rulivan supplies 15 U.S.P. units of liver injection and 30 micrograms of vitamin $B_{12}$.

* * *

**LIPOMUL ORAL . . .** is a high caloric dietary supplement providing fats as a concentrated source of energy in a specially homogenized form readily absorbed and utilized by both adults and children. It is indicated for the under-weight and the malnourished; in prolonged convalescence, chronic illness; and postoperatively to furnish calories and spare dietary protein for body protein deposition. Supplied by The Upjohn Company, Lipomul Oral is a forty percent emulsion of vegetable oil in an aqueous carbohydrate media providing 120 calories per ounce. For administration Lipomul Oral should be mixed with milk in any proportion or flavored with chocolate syrup, or any other suitable flavor. The recommended dosage for adults—one to three fluid ounces (two to six tablespoonfuls) three times daily after or between meals; for children—one-half to two fluid ounces (one to four tablespoonfuls) twice daily.

* * *

**MYCIGUENT OINTMENT . . .** is a preparation containing 5 mg. per gram of finely divided neomycin sulfate in a bland, grease-type base designed to preserve stability. The ointment is stable at room temperature for at least one year. Myciguent Ointment is supplied by The Upjohn Company and is useful in the treatment of impetigo and impetiginous dermatitis, secondarily infected wounds and ulcers, and some chronic eczematous dermatoses. It is also useful as a dressing for burns both for immediate application to prevent infection and in treatment of secondarily infected burned areas. Other infections, such as barber's itch, old sores, fever blisters, pustules, pustular acne and boils, respond favorably to treatment with Myciguent. The ointment is well tolerated and relatively non-irritating.

**NISENTIL HYDROCHLORIDE** . . . the rapid-acting obstetrical analgesic, is now being supplied by Hoffman-La Roche, Inc. in 10 cc. vials containing 60 mg. per cc. In a series of 1,000 obstetric patients receiving Nisentil in 40 to 80 mg. doses, it proved superior to any obstetrical analgesic previously used.

* * *

**PHENURONE** . . . also known as Phenacemide, is a new synthetic anticonvulsant for the treatment of epileptic disorders. It is available from Abbott Laboratories. Clinical studies show that Phenurone is effective in relieving certain patients of seizures unaffected by any other form of anti-epileptic therapy. Investigation has shown it to be particularly effective in treating psychomotor seizures. In *grand mal* the incidence of improvement was greater when the seizures occurred in patients who also experienced *petit mal* or psychomotor attacks than when *grand mal* was the single manifestation.

Being a potent drug, Phenurone entails the assumption of risk, which must be weighed against the benefit to the patient. Except in carefully selected cases, Phenurone should be administered only after other accepted anticonvulsants have been tried and found ineffective. Personality changes, if severe or exaggerated, signs of liver damage, rash or marked depression of the blood count are indications for immediate withdrawal of the drug. The dosage must be based on the patient's response. A suggested initial dose for adults is 0.5 gram three times a day with meals, gradually increasing to an average dose of two to three grams per day. For children five to ten years old, approximately one-half the adult dose. Phenurone is supplied in 0.5 gram tablets grooved.

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**NEPHENALIN** . . . is a "relay action" antiasthmatic, combining in a single tablet elements that dilate the bronchi in about 90 seconds and extend this initial asthma relief four hours or more. The thin outer coating of the Nephenalin tablet contains 10 mg. of N-isopropyl arterenol, the epinephrine precursor and potent broncho-dilator that is rapidly effective through sublingual absorption, but of relatively brief action. The nucleus of the tablet, swallowed after the arterenol coating has provided quick (90-second) relief of asthmatic symptoms, contains the reliable, long-acting antiasthmatic combination of theophylline, 2 grains, ephedrine sulfate, $\frac{3}{8}$ grains and phenobarbital, $\frac{1}{8}$ grain. As a result, asthma patients may control their symptoms all day with only three Nephenalin tablets.

* * *

**PRENDEROL** . . . for the treatment of certain neuromuscular disorders, has been announced by Squibb. It is a muscle relaxant, its effects in certain neuromuscular disorders resembling those of Tolserol. It differs from Tolserol in its action on the cerebrum, causing slight slowing of a normal electroencephalogram and in large doses produces spikes in the electrical tracing. Prenderol is principally useful in spastic conditions resulting from cord dysfunction. It has been found that some patients who do not benefit from Tolserol therapy improve after Prenderol is administered.

Optional dosage level is 80 to 110 mg./lb./day. Because of the short duration of action, this dosage is best given in divided doses five to six times per day. Most patients with spasticity will show change in muscle status within a short time. The administration of Prenderol for periods of time longer than two months is not recommended. On some occasions, side effects such as drowsiness are produced at the upper therapeutic dosage level. The gastric discomfort sometimes caused by large oral doses may be minimized by giving Prenderol after meals; this symptom tends to disappear as medication is continued. If it is necessary to give Prenderol between meals, some water should be taken before and after ingestion of the drug. Giving the patient a cracker also helps minimize gastric discomfort when Prenderol is taken between meals. Prenderol is supplied in 0.5 gram tablets.

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**REDICYTE** . . . is a combination of nine factors designed for the treatment of both iron-deficiency anemias and macrocytic and megaloblastic anemias. It is available from Sharp and Dohme. Redicyte is said to be particularly valuable in cases which cannot be specifically diagnosed, and may also be prescribed for supplemental treatment of pernicious anemia. Each capsule contains thiamine hydrochloride, riboflavin, pyridoxine, vitamin $B_{12}$, folic acid, ascorbic acid, ferrous sulfate, liver fraction and powdered stomach. The recommended dosage of Redicyte is only one capsule three times daily, with or after meals. This may be varied according to the specific case. Capsules are supplied in bottles of 100 and 1,000.

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**SELSUN SUSPENSION** . . . a preparation containing selenium sulfide, is for use in the treatment of seborrheic dermatitis of the scalp. Available from Abbott Laboratories, Selsun is reported to relieve itching and burning after two or three applications, to restore the scalp to normal condition and keep it free of the characteristic scales for one to four weeks in most patients. In clinical trials with 400 patients, Selsun effectively controlled seborrheic dermatitis of the scalp in 81 to 87 percent of all

cases, while mild or common dandruff was controlled in 92 to 95 percent of the cases. Many of these patients had used shampoos and sulfur preparations without satisfaction.

Selsun Suspension is applied while washing the hair and is convenient and pleasant to use. Specific instructions are determined by the physician and, after the initial period of treatment, applications are usually once a week or less often. Selsun is available only on a physician's prescription.

* * *

**ZINAX BURN DRESSING . . .** introduces a new concept of treating burns. Available from Hynson, Westcott and Dunning, Zinax Gel consists of partially hydrolyzed casein, with the addition of two percent sodium lauryl sulfate. It is applied as a heavy coating not less than ⅛ inch thick to the burned area. The application should extend beyond the burn area, to insure adhesion of the Zinax Gauze Bandage to the skin. Strips of Zinax Gauze are laid longitudinally over the area. Zinc acetate, with which this gauze is impregnated, coagulates the upper surface of the gel, forming a semi-permeable membrane.

*Method of Treatment*: With sterile technic any loose necrotic skin is removed; if grease has been used previously, this is removed with ether. Zinax Gel is applied to the superficial as well as to the more deeply burned areas, with a sterile applicator blade, to a thickness of not less than ⅛ inch, using a mopping motion. This is covered with strips of the Zinax Impregnated Gauze over which a bandage is applied.

When dressing arms or legs, the Zinax Gauze is laid longitudinally rather than encircling the part, in order to prevent any abnormal pressure points.

On the face and on small burns the gel and the gauze may be applied as a patch, which serves as the only dressing, in which case the gauze must be pressed well into the gel, since no elastic bandage is used.

The dressing may remain in place as long as desired; however, where there is only erythema or first degree burn, it is usually removed the following day. In the case of superficial second degree burns, it may be left intact until healing occurs. In deep second degree and third degree burns where grafting may be necessary, it has been found that the surface is frequently ready for grafting within ten days. It is advantageous in these cases to hasten the clean-up of the dead tissue by redressing the burn once during this period.

If the dressing remains on the wound until healing has occurred in second degree burns, it will then drop away from the wound readily. If, however, removal at an earlier time is desired, this can be accomplished more easily by soaking the dressing with warm saline solution. In deep second degree and third degree areas, since the dead skin becomes lysed, the film is readily separated from the surface of the burn.

*Advantages*: Extensive clinical studies reported before the Surgical Section of the American Medical Association have shown that Zinax Burn Dressing has outstanding advantages over any previous methods of treatment. These advantages may be summarized as follows:

1. No surgical debridement or clean-up is necessary except that obvious dirt, loose necrotic skin, or grease is removed.
2. Skin grafting where necessary is accomplished in most cases within 9—22 days.
3. Prevents local loss of proteins.
4. At the same time water is allowed to pass through, thus preventing maceration.
5. Pain is eased almost at once, reducing the need of opiates.
6. There is practically no edema.
7. Speed and ease of application saves from one third to one half the usual dressing time.
8. The setting and flexible splinting effect of the gel permits the patient to be turned or moved without difficulty.
9. The initial dressing may be allowed to remain until removed for inspection or skin grafting. Redressing at frequent intervals is not necessary. In some cases the first dressing has been allowed to remain for as long as two weeks.
10. No reactions or sepsis have occurred in the many hundreds of cases treated.
11. Burns of all degrees, extensive and small, have been treated with equally satisfactory results.
12. Blistering in flash and other burns has not occurred if the dressing is applied before blisters form.
13. There is less evidence of shock and less supportive treatment has been necessary.
14. It is not ncessary to use occlusive bandages on hands, arms or face. Bulky dressings are eliminated.
15. Flexibility of the dressing permits the hands, face and other areas to be dressed without immobilizing the patient.
16. In a series of over 300 industrial burns, many third degree, ranging up to 24 square inches in size and involving various parts of the body, there was no case in which a patient lost time from his normal work.

Zinax is supplied in units of one four fluid ounce can of the Gel and in two yard rolls of the Gauze and in bulk packages containing ten ¾ fluid ounce tubes of Gel and one hundred 2" x 2" Zinax Gauze pads.

# CURRENT LITERATURE

*Edited by* SISTER MARY ETHELDREDA, *St. Mary's Hospital, Brooklyn, N.Y.*

***AMERICAN JOURNAL OF PHARMACY***

JULY, 1951—"Unfair Hospital Competition," by L. F. Tice. A thought provoking editorial on the trend of hospitals filling prescriptions for the public.

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***AMERICAN PROFESSIONAL PHARMACIST***

JULY, 1951—"A Survey of Bulk Compounding in Hospital Pharmacies," by Midori Miya and H. G. DeKay. Presents a summary of the thinking and experiences in regard to bulk manufacturing as received from a number of hospital pharmacists.

*page 644*

AUGUST, 1951—"Self-Analysis Quiz for Chief Pharmacists." A twenty-eight question test along with the current answers and reasoning for them. Intended to point out to hospital pharmacists defects in his understanding of hospital responsibilities.

*page 732*

SEPTEMBER, 1951—"The New Look In Navy Pharmacy," by Lt. J. E. Fowler and O. A. St. Jacques. A description of the Pharmacy Service at the U. S. Naval Hospital at Great Lakes, Ill. Includes photographs of equipment and outlines in detail the duties of the Chief of the Pharmacy Service and the Administrative and Working Supervisors.

*page 824*

***HOSPITALS***

JULY, 1951—"What Minimum Standards Mean to the Hospital Pharmacy," by Sister M. Etheldreda. An elaboration of the Minimum Standard as presented at the Ontario Hospital Association, Toronto, Canada.

*page 64*

AUGUST, 1951—"Departmental Organization of the Hospital." Each major department is analyzed and its position in the hospital organization chart explained. The Pharmacy is included on page 29 under the following captions: Purpose, Responsibility for, Authority, Inter- and Intra- Relationships, Standards, Physical Facilities and Staffing.

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***HOSPITAL MANAGEMENT***

JULY, 1951—"The Hospital Pharmacy of the University of Chicago Clinics," by Florence M. Hatter. Describes the setup of the hospital pharmacy at this institution.

*page 94*

AUGUST, 1951—"Why We Do Not Manufacture Parenteral Solutions," by Robert V. Fay, assistant administrator, Bridgeport Hospital, Bridgeport, Conn. A thought provoking article on the reasons why this institution has found it impractical to consider preparing sterile solutions.

*page 64*

SEPTEMBER, 1951—"The Trend Toward Achievement of Pharmacy Goal . . . Professional Recognition," by Norma W. Phillips. A discussion of the opportunity open to a pharmacist to help improve the professional status of his relationship in the field of health.

*page 100*

"A Review of the National Formulary, Ninth Edition—1950," by Anna Dunham Thiel. A thorough presentation of changes, deletions and additions to the latest official edition of the text.

*page 106*

***HOSPITAL PHARMACIST (CANADA)***

JULY-AUGUST, 1951—"Pharmacy Controls," by J. Cook. Suggested methods for controlling drugs in hospitals along with forms which may be used.

*page 197*

SEPTEMBER-OCTOBER, 1951—"Thirty Days In A Hospital Pharmacy," by F. D. Buck. Describes in detail the work a hospital pharmacist may do in a month emphasizing the need for proper planning of space and adequate personnel.

*page 247*

MARCH-APRIL, 1951—"Weaknesses in Hospital Pharmacies," by F. H. Silversides. Suggestions for developing all facets of the pharmacy department making yourself indispensible.

*page 81*

"Some Common Stains and Suggestions for Their Removal", by Perrin Statia.

*page 83*

***HOSPITAL PROGRESS***

MAY, 1951—"The One-Man Pharmacy," by Sister Marian. Management of a one-man pharmacy is described.

*page 158*

JUNE, 1951—"The Pharmacy—Minimum or Minus," by Sister Mary Bernardine. Discusses implementation of the *Minimum Standard for Pharmacies in Hospitals* urging pharmacists to make a self-evaluation of their department.

*page 189*

AUGUST, 1951—"The Role of the Pharmacist in Staff Education," by Sister Mary Laurissa. Outlines specific steps in providing an educational program in the hospital for nurses and physicians. The type of program outlined is one which can be utilized particularly in smaller hospitals where there is no nursing school or intern staff.

*page 255*

SEPTEMBER, 1951—"Goal Posts—Point Rating System, Hospital Construction, Financial Statement," by Sister Mary Bernadine. Comments of interest.

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***MODERN HOSPITAL***

JULY, 1951—"A Formulary Would Help in Purchasing Drugs." A round table discussion on this subject presented by the administrators and purchasing agents.

*page 18*

AUGUST, 1951—"The New Hospital." Methods and Outlines for a Symposium on Hospital Operation. A continuation of the presentation started in the previous issue. All major hospital units are analyzed. The hospital pharmacy is discussed in reference to personnel, administration, supervision and control and records and reports.

*page 73*

"Vitamin Enzyme Relationships," by James A. Bain, M.D. An explanation of the mechanisms underlying the phenomena of vitamin deficiency.

*page 106*

***PHARMACY INTERNATIONAL***

JULY, 1951—"The Importance of Parenteral Solutions," by Sister M. Donatus. Describes technic used in the manufacture of parenteral solutions at St. Clare's Hospital, New York City. Includes description of equipment necessary and information on cost to manufacture.

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***WESTERN DRUGGIST (CANADA)***

MAY, 1951—"Streamlined Dispensary — Vancouver General Hospital Modernizes Pharmacy and Opens Outpatients' Branch." Describes the pharmacy department at Vancouver General Hospital showing photographs before and after renovation. Chief pharmacist is Percy Cunningham, also president of the B.C. Chapter, Canadian Society of Hospital Pharmacists.

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***SOUTHERN HOSPITALS***

JULY, 1951—"The Pharmacist in the Medical Team," by Dwight L. Ferguson, chief pharmacist, VA Center, Bay Pines, Fla. Presents methods that may be used to establish a worthwhile and respectful position on a medical team.

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AUGUST, 1951—"Pharmacy Cost Control," by Millard Johnson, pharmacist, Baptist Hospital, Birmingham, Ala. Cost control is discussed in terms of quantity buying, the hospital formulary, physician relationships and manufacturing.

*page 49*

SEPTEMBER, 1951—"Emergency Floor Stock and Routine Medicines," by Lewis R. Bevis, chief pharmacist, Tallahassee Memorial Hospital, Fla. Discusses common points of interest relative to handling emergency floor stock and routine medications.

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OCTOBER, 1951—"Essential Business Records," by Jack Kirkland, chief pharmacist, Grady Memorial Hospital, Atlanta, Ga. Emphasizes the need and use of business records in the pharmacy.

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## Phytotherapy Emphasized

The use of plant drugs in medicine, although deemphasized in medical training, is said to be of increasing importance in the age of chemotherapy according to E. F. Steinmetz, editor and publisher of two books on the subject which will be available in 1952. *Acta Phytotherapeutica,* a scientific journal on vegetable medicine which will be available in English, French and German will convey practical knowledge concerning about 1400 items, including rare botanicals. Another book on botanical drugs, *Materia Medica Vegetabalis* which will be published in English, French German and Dutch will also broaden the scope of information available on this subject. These books should fill the need for exact information on botanical drugs which continue to be used to a considerable extent and should be of value to pharmacists and physicians. Copies may be obtained from E. F. Steinmetz, Keizersgracht 714, Amsterdam C. Netherlands.

# *as the president sees it*

WALTER M. FRAZIER

*Springfield City Hospital, Springfield, Ohio*

The most valuable possession of the American Society of Hospital Pharmacists is the initiative of the individual members. This applies to the practice of hospital pharmacy and also to organizational activity. Wherever initiative and ability are present we soon see development in the form of better pharmacy departments in hospitals and active groups of hospital pharmacists who exchange ideas and work together.

It was my privilege to attend the meetings of the Southeastern Society of Hospital Pharmacists at Memphis, October 5, 6, 7. For some years the Southeastern group has been one of our finest and strongest affiliated chapters. Their success is evidenced by growth and achievement. Congratulations and a sincere welcome to the officers and members of the newly affiliated Memphis Society of Hospital Pharmacists. We anticipate other new local and state chapters in the South and in other sections of the country very soon. This is an ideal time to join, organize and affiliate. It is the anniversary year! 10 for ASHP—100 for A.Ph.A.

Mrs. E. G. Scott, our Project Committee Chairman, has chosen two vice-chairmen to assist her. They are Lt. H. W. Beard who was formerly active in the Northern California Society and is now stationed at U.S.P.H.S. Hospital in Cleveland, and Mr. Clarence Miller, Chief Pharmacist at Glenville Hospital, who has been active in the Cleveland and Ohio Societies. Mrs. Scott reports good response to the Project Committee letters. Replies indicate that a number of affiliated chapters are already at work. Topics which I think could be well chosen and typical of the general idea are as follows:

1. Development of a simple system of filing pharmaceutical literature.
2. A study of detergents suitable for pharmaceutical glassware.
3. A handbook of toxicology for the hospital pharmacist (to include pesticides and newer household agents so often not included in texts on toxicology).
4. A study of suitable closures for different types of pharmaceutical products dispensed in the hospital pharmacy. This would include specifications, sources, costs for appropriate quantities.
5. An ideal germicidal solution for thermometers—non-toxic; low cost; one which would not remove paint on calibrations.

We have two other new Special Committees this year. Mr. Joe Vance, assistant administrator and chief pharmacist at South Highlands Infirmary, Birmingham, Ala., is chairman of the Committee to Study Application of Hospitalization Insurance Plans to Hospital Pharmacy Management. We know that in some sections of the United States, hospital pharmacists have already been called upon to discuss pharmacy policy in connection with Hospitalization Insurance Plans. In relation to total hospital accounting, fees for compounding service, and the pricing of drugs, and charges for administration of parenterals become increasingly complex and intricate subjects. Although great variation exists in Hospitalization Insurance Plans throughout the country and philosophy on these subjects differs from one hospital to another it is hoped that the committee which represents various hospital types and many geographical areas can compile some basic facts and present to the ASHP—some conclusions which will be useful to our individual members.

Mr. Herbert L. Flack is chairman of the Committee to Study Central Sterile Supply. Many hospital pharmacists believe that there exists a natural association or fundamental common ground between Hospital Pharmacy Service and Central Sterile Supply Service. It is possible that the two departments could, under certain conditions, be operated to greater advantage, under the control or supervision of the chief pharmacist. Two good examples of such an arrangement exist at Johns Hopkins Hospital, Baltimore, Md., and Mercy Hospital, Toledo, Ohio. Others that I know of combine some of the functions. The committee will investigate the opportunities and possibly submit plans whereby the work of the two departments can be correlated. I am sure we can benefit by their findings and conclusions.

# A.S.H.P. AFFILIATES

The OHIO SOCIETY OF HOSPITAL PHARMACISTS held its fall meeting at the Commodore Perry Hotel in Toledo, October 10 and 11 with forty members present. The program included a report on the A.Ph.A. convention by Marguerite McNeal, Grant Hospital, Columbus; "Time Saving Hints for the Hospital Pharmacist," by William Slabodnick of Massillon City Hospital, Massillon; "Sources of Supply for Equipment and Material for Hospital Pharmacists," by Sister Mary Florentine, Mount Carmel Hospital, Columbus; "The Value of Monthly and Yearly Reports to The Pharmacy Department," by Neal Johnston, Springfield City Hospital, Springfield, Ohio; "Preview on P.C.M.X. (Chloroxylenol, Br.), a new Germicidal and Sterilizing Preparation Made in Toledo," by Sister Mary John, Mercy Hospital, Toledo; and "Newer Ointment Bases" by Professor Jose Aponte, University of Toledo School of Pharmacy.

The social program was planned by the Toledo Society headed by Sister Mary John.

Officers elected at a recent meeting of the HOSPITAL PHARMACISTS OF THE PUGET SOUND AREA are President David Irvine, Seattle General Hospital, Seattle, Wash.; Vice-President Nora Nelson, Renton Hospital, Renton, Wash.; Treasurer Fred Boehm, Tacoma General Hospital, Tacoma, Wash.; and Secretary Elmer M. Plein, University of Washington School of Pharmacy, Seattle.

Meeting at the St. Francis Hospital in Pittsburgh on October 22, the WESTERN PENNSYLVANIA SOCIETY OF HOSPITAL PHARMACISTS heard Dr. Philip G. Leavy discuss the medical treatment of ulcer.

At the September meeting of the Western Pennsylvania Society the following provision was made in the Constitution and By-Laws for sending a delegate to the national meetings:

"The delegate to any National Conference or meeting of the American Society of Hospital Pharmacists shall be the president or someone appointed by the president with the approval of the members. The expenses of the delegate will be defrayed by decision of the executive committee."

The WISCONSIN SOCIETY OF HOSPITAL PHARMACISTS held its first meeting of the new year at Mount Sinai Hospital in Milwaukee on September 21. "The Use of Radioactive Isotopes in the Diagnosis and Treatment of Diseases," was discussed by Mr. Feoffrey Gleason, associate director of the Radioactive Pharmaceuticals Department at Abbott Laboratories. During the business session, Mr. E. Kuenzi, official delegate of the Wisconsin Society to the ASHP annual meeting, reported on the highlights of the convention.

At the October 19 meeting of the Wisconsin Society held at St. Joseph's Hospital in Milwaukee, projects for the year were outlined as follows:

1. Formation of a liaison committee to work with the executive committee of the Wisconsin Pharmaceutical Association and to more closely unite our two groups.
2. Cooperation with the University of Wisconsin College of Pharmacy to set up a curriculum in hospital pharmacy for undergraduates interested in entering hospital work after graduation.

Sister Gladys Robinson reported on the convention of the Wisconsin Pharmaceutical Association and also on the efforts of the group to have a hospital pharmacist on the State Board of Pharmacy.

At the October 17 meeting of the OKLAHOMA SOCIETY OF HOSPITAL PHARMACISTS, Mr. C. J. Masterson, president of the American College of Apothecaries, was guest speaker. Covering the subject, "The Objects of the Society of Hospital Pharmacists," he stressed the importance of interrelation between the hospital pharmacists and allied professions.

During the business meeting the Committee on Constitution and By-Laws reported and it was decided to further study the Constitution before approval and affiliating with the national organization.

The ARIZONA SOCIETY OF HOSPITAL PHARMACISTS sent the following resolution to the Arizona Pharmaceutical Association to be considered at its 1951 meeting:

"*Whereas* the Arizona Pharmaceutical Association in meeting assembled recognizes the principle of protection for the hospital patient expressed in the new Pharmacy Act, be it

"*Resolved* that pharmacists in their respective communities offer their services in cases where fulltime employment of pharmacists is not practical or necessary, and

"*Be it further resolved* that these pharmacists apply to the Arizona Society of Hospital Pharmacists for guidance, consultation and instruction in this special branch of pharmacy practice, and

"*Be it further resolved* that the secretary of the Association be instructed to transmit a copy of this resolution to all the administrators of hospitals in the state."

It was suggested that a letter be forwarded to all hospital administrators in the state along with a copy of the new Pharmacy Act and the *Minimum Standard for Pharmacies in Hospitals.*

Other activities of the Arizona Society include work in the field of education of hospital pharmacists, studies of hospital formularies and consideration of plans for organizing a Western Society of Hospital Pharmacists.

At the September 16 meeting of the Arizona group held at Pima County Hospital in Tucson, Mr. David Axelrod presented a report on the New Orleans Institute on Hospital Pharmacy. Highlights of the discussion included new drugs, hospital administration, buying problems and current shortages of drugs and chemicals.

At the October 21 meeting held at Memorial Hospital in Phoenix, Mrs. Myrdas Brewer, official delegate to the ASHP annual meeting from the Arizona Society, reported on the convention. Consideration was also given to special projects for the Arizona group and the members were ask to consider plans for the part hospital pharmacists should play in the April meeting of the Arizona Pharmaceutical Association.

Approximately ninety hospital pharmacists and interested persons representing thirteen states attended the semi-annual meeting of the SOUTHEASTERN SOCIETY OF HOSPITAL PHARMACISTS held in Memphis, Tenn., October 6 and 7.

During the two-day meeting, Thomas A. Foster, pharmacist director of the Division of Civilian Health Requirements, Washington, D. C., spoke on "Current Problems of Production and Supply of Pharmaceuticals During the Emergency Period." Dr. Don E. Francke, president of the American Pharmaceutical Association and director of the Division of Hospital Pharmacy, journeying from the International Federation of Pharmacy in Rome, Italy, spoke on the "Division of Hospital Pharmacy and Its Facilities." Walter M. Frazier, president of the ASHP and chief pharmacist at Springfield City Hospital, Springfield, Ohio discussed the "American Society of Hospital Pharmacists and Its Affiliated Groups." Herbert L. Flack, chief pharmacist, Jefferson Medical College Hospital, Philadelphia, Pa. presented a discussion and demonstration on "New Concepts in the Manufacture of Parenteral Solutions."

*Semi-annual meeting of the Southeastern Society of Hospital Pharmacists at Memphis, October 6 - 7. Speakers at the meeting and officers are pictures.* SEATED LEFT TO RIGHT: *Walter Frazier, Gloria Niemeyer, Johnnie Crotwell, Lillian Price, Ernest W. Rollins, Don Francke.* STANDING LEFT TO RIGHT: *G. D. Colina, Malcolm Claus, Valerie Armbruster, Thomas A. Foster, Herbert Flack, Robert Statler and Joseph Sykes.*

"The Role of the Veterans Administration Hospital Pharmacist," was discussed by Robert A. Statler, chief, pharmacy operations section, Pharmacy Division, Veterans Administration, Washington, D. C. Malcolm Claus, chief pharmacist at Baptist Hospital in New Orleans covered "The Role of the Chief Pharmacist."

Miss Valerie Armbruster, chief pharmacist, Charity Hospital, New Orleans, presided over a panel discussion on "Hospital Pharmacy Administrative Problems." Included on the panel were the following: Joseph Sykes, chief pharmacist at John Gaston Hospital, Memphis, who covered "Management of the Outpatient Pharmacy"; Gilberto D. Colina, Mercy Hospital, Charlotte, N. C., speaking on "After Hour and Emergency Request for Drugs"; and Miss Libbie Merlin, Emory University Hospital, Atlanta, Ga., who discussed "Narcotic and Barbiturate Control."

Charles E. Wilson, pharmacist in Corinth, Miss., was the speaker at the Dutch Dinner on Saturday night. A "History of the Southeastern Society of Hospital Pharmacists" covering activities since its organization was presented in a narration-picture panel by Miss Johnnie M. Crotwell, Georgia Baptist Hospital, Atlanta; and Mrs. Lillian Price, Emory University Hospital, Emory University, Ga.

A special feature of the meeting was the Pharmacy Service Exhibit sponsored by the Veterans Administration.

Special entertainment consisted of friendship parties, a tour of Memphis hospitals and breakfast and luncheon sponsored by the Memphis Chapter, Wm. D. Upchurch, chairman; Bristol Laboratories, Wm. R. Warner Company and Wyeth, Inc.

The first official meeting of the AKRON AREA SOCIETY OF HOSPITAL PHARMACISTS was held on September 11 at Northside Hospital in Youngstown. Twenty-three hospital pharmacists were present representing Alliance, Akron, Canton, Dover, Mansfield, Massillon, Salem, Warren, Wooster, Youngstown, and Sharon, Pa. Mr. William Slabodnick reported on the annual meeting of the ASHP and new committees were appointed.

Announcement of meetings for the current year was made as follows:

October 16—Peoples Hospital, Akron
November 13—Aultman Hospital, Canton
December 11—Massillon Hospital, Massillon
January—St. Elizabeth Hospital, Youngstown
February 12—Alliance City Hospital, Alliance
March 11—Akron City Hospital, Akron
April 8—Children's Hospital, Akron
May 7—Sharon General Hospital, Sharon, Pa.
June—Annual picnic

At the September meeting of the NEW JERSEY SOCIETY OF HOSPITAL PHARMACISTS, Mr. L. Kazin, director of the Extension at Rutgers College of Pharmacy outlined the plans of the Service to include hospitals. He pointed out that their aim is to assist in the solution of problems in hospital pharmacy, to stimulate interest in this specialty, to increase efficiency, to standardize procedures, to furnish contact with administrators, to render service to those hospitals which do not employ registered pharmacists and to stimulate the development of pharmacy in such institutions. At the request of Mr. Kazin, the following committee was appointed to work with the Extension Service in an advisory capacity: Ludwig Pesa, Rudolph Wilhelm, Charlotte Samuels, Mrs. Anna C. Richards, Herbert Falk and Mrs. Evelyn Carlin.

Also presented at this meeting was the paper on "Are Hospital Pharmacists Inbred," by Miss Charlotte Samuels. Reports were given on the New Orleans Institute by Mr. Wilhelm and on the A.Ph.A. convention and ASHP annual meeting by Mr. Pesa, Mr. Wilhelm and Miss Samuels.

*Hospital Pharmacy News* is the new name selected for the publication of the NORTHERN CALIFORNIA SOCIETY OF HOSPITAL PHARMACISTS. The name was submitted by Miss Aina Johnson.

At the September 17 meeting of the Northern California Society held at the Southern Pacific General Hospital in San Francisco, the program included a forum on hospital pharmacy operation. With Mr. Jack Heard as chairman, the following subjects were covered: "The Hospital Pharmacist as Purchasing Agent," by Miss Betty Barry, Vallejo General Hospital, Vallejo, Calif.; "What Items Should A Hospital Pharmacy Manufacture?" by Mr. Francis Spinelli, Southern Pacific General Hospital, San Francisco; and "The Role of the Pharmacy in the Economic Picture of the Hospital," by Mr. William P. Germain, assistant administrator, Children's Hospital, San Francisco.

A report on the A.Ph.A. convention was presented by Mr. Claude Busick, St. Joseph's Hospital, Stockton, California.

"Problems of Hospital Pharmacy Related to Retail Pharmacy" was the subject of the panel discussion at the September 25 meeting of the MICHIGAN SOCIETY OF HOSPITAL PHARMACISTS. Members of the panel included Mr. Harry Williams, *moderator*; Mr. Charles Wilson and Mr. Al Pisa representing retail pharmacy; and Mr. Harvey A.K. Whitney and Mr. Lou Lester representing hospital pharmacy.

Alex Knight, chief pharmacist at Wyandotte

General Hospital in Wyandotte, Mich. was elected president of the Michigan Society for the coming year. Other new officers include William Bertz, vice-president, University Hospital, Ann Arbor, Michigan; Audrey Sogoain, secretary, Evangelical Deaconess Hospital, Detroit, Mich.; and Paul Parker, treasurer, University Hospital, Ann Arbor.

Members of the MIDWEST ASSOCIATION OF SISTER PHARMACISTS met at St. Francis Hospital in Evanston, Ill. on September 20. New officers were installed and Sisters who are in charge of the drug room in small hospitals, but who are not pharmacists, were accepted as Associate Members of the Midwest group. Reverend Father Moscow presented an encouraging talk on the work accomplished and future plans for the Association.

Dr. L. Sluzynski speaking on "Preparedness For the Nation's Emergency," presented the overall picture of what is being done in preparing for atomic or gaseous warfare. A talk was also presented by Sister M. Lourdes, P.H.J.C., on "Better Relations Between Hospital Departments." This was followed by an informal discussion in federal regulations in regard to handling narcotics in hospitals.

Affiliation of the MEMPHIS CHAPTER OF THE ASHP with the national organization has been approved by the executive committee. With more than 20 charter members, the Memphis Chapter has made great strides since its organization. Officers of this group are President Howard Hassler, University of Tennessee School of Pharmacy, Memphis; Vice-President Sister Mary Franciscana, St. Joseph's Hospital, Memphis; Secretary Victor H. Crouch, VA Kennedy Hospital, Memphis; and Treasurer Joseph R. Sykes, John Gaston Hospital, Memphis.

New members of the CLEVELAND SOCIETY OF HOSPITAL PHARMACISTS present at the September 26 meeting were Mr. Henry Beard, U. S. Public Health Service Hospital, Cleveland, Miss Jacqueline Young, Lutheran Hospital, Cleveland, and Mr. Frank Kucia, St. Joseph Hospital, Lorain. The program for the meeting included a talk on "New Developments in the Detergent Field," by Mr. A. G. Bowers. He covered soaps and synthetic detergents.

Tentative plans for future meetings were outlined and announcement was made concerning the convention of the Ohio Society of Hospital Pharmacists meeting in Toledo October 10 and 11. Mrs. Evlyn Scott, chairman of the national Committee on Special Projects introduced the idea to the Cleveland Society and plans were made for setting up and maintaining a filing system for pamphlets received from drug houses.

The first joint meeting of the HOSPITAL PHARMACISTS' ASSOCIATION OF GREATER ST. LOUIS including the Sister Pharmacists, was held at St. Mary's Hospital in St. Louis on September 16. Plans are being made for the St. Louis group to hold several meetings each year in the afternoons so that all of the Sister Pharmacists can attend.

There was some discussion in regard to the present status of the Minimum Standard and the work of the local chapters and individuals in promoting the Standard. A temporary Committee on Minimum Standards was appointed including Sister Mary Berenice, Mr. Oliver Steppig and Mr. Francis Rudi.

New officers of the TOLEDO SOCIETY OF HOSPITAL PHARMACISTS include Eula Smith, Flower Hospital, president; Edwin Bohrer, Toledo Hospital, vice-president; and Rose Lenga, St. Vincent's Hospital, secretary-treasurer.

*Officers of the new* MEMPHIS CHAPTER OF THE ASHP *are from left to right: Howard Hassler, president; Sister Mary Franciscana, vice-president; Victor H. Crouch, secretary and Joseph R. Sykes, treasurer.*

Bronze Arabic mortar and pestle from Palestine. Thirteenth Century. This bronze mortar bears fine decorative tooling and an inscription in Arabic, translated as follows: "The owner of blessedness and gifts, Abbas Odesansen, member of Alnic Usac, 1226." On another part of the mortar appears the name of a woman—"Sahi Bet Ali," who was probably the original owner. It was purchased by a collector in Palestine and now rests in the museum of the Philadelphia College of Pharmacy and Science.

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# NEWS ITEMS

### National Pharmacy Week in Hospitals

At Peoples Hospital in Akron, Ohio, patients were informed about the hospital's pharmacy during National Pharmacy Week with the following note on their first food tray after entering the hospital:

"National Pharmacy Week is being observed October 21-27. "The Peoples Hospital Pharmacy is in charge of W. H. McElroy, with Theodore Mink as the assistant pharmacist. Of the 5,900 hospitals in the United States, only 50 percent have pharmacies, according to Mr. McElroy. The Peoples Hospital Pharmacy fills an average of 150 prescriptions daily."

### Internship Programs

Plans are being made to publish in the January-February (1952) issue of THE BULLETIN a survey showing the names of hospitals offering internships, both academic and non-academic. A survey is being made of the colleges of pharmacy offering such training; however, it is difficult to know about hospitals which are not affiliated with a teaching program.

We would therefore appreciate it if anyone having a non-academic internship program in his hospital would notify Mr. Herbert L. Flack, chief pharmacist, Jefferson Medical College Hospital, Philadelphia, Pa. It will be advantageous if you will forward the following information about the internship program at your hospital prior to January 1, 1952: name of hospital; number of interns you can accomodate at one time; period of training; remunerations; and whether the program is a formal or informal training period.

### CHA's Pharmacy Committee Meets

The Catholic Hospital Association's Committee on Hospital Pharmacy Practice, under the leadership of Sister M. Carl, O.P. of St. Dominic's Hospital in Jackson, Miss., met at the Association headquarters in St. Louis on September 28 and 29. Others attending the meeting were Sister M. Blanche, O.S.F., Sacred Heart Sanitarium, Milwaukee, Wisconsin; Sister M. Berenice, S.S.M., St. Mary's Hospital, St. Louis, Mo.; Sister M. Ancilla, S.S.J., St. Joseph's Hospital, Hamilton, Ontario, Canada; and Sister Marian, S.C., St. Elizabeth's Hospital, Elizabeth, N. J. Consultants to the Committee for this meeting included Mr. Oliver Steppig, Alexian Brothers' Hospital, St. Louis; Sister M. Ludmilla, S.S.M., Firmin Desloge Hospital, St. Louis; and Sister M. Adelaide, St. Elizabeth's Hospital, Youngstown, Ohio, representative of the Association on the Policy Committee of the A.Ph.A.

The agenda for the two-day session embraced the following major considerations:

1. The report of the study on hospital pharmacies conducted last year.
2. The review of the Suggested Point Rating Plan for hospital services.
3. The investigation of all companies engaged in the manufacture or distribution of unethical materials.
4. The development of policies for the hospital pharmacy.
5. The planning of the program for the fourth Annual Institute for Hospital Pharmacists scheduled to take place in Cleveland, May 24-28, 1952.

### Slides Available for Teaching

The Division of Hospital Pharmacy is making available for sale or on loan slides for use in teaching hospital pharmacy. These may be used in connection with courses in hospital pharmacy or in group meetings of hospital pharmacists. The slides have been classified according to general subjects as follows: Organization and Planning; Equipment and Fixtures; Manufacturing; Records and Forms; Dispensing; Parenteral Solution Manufacture; and Miscellaneous.

Anyone interested in securing the slides may write to the Division of Hospital Pharmacy, 2215 Constitution Ave., N.W. Washington, D. C.

### Dodds to Public Health Service

Arthur W. Dodds, formerly chief pharmacist at the Lynn Hospital, Lynn, Massachusetts, has been commissioned as pharmacist officer in the Regular Corps of the U. S. Public Health Service. Mr. Dodds will serve as training officer in the development of the hospital pharmacy intern program of the Division of Hospitals. He will also serve as pharmacist officer at the Public Health Service Hospital in Norfolk, Virginia.

Mr. Dodds has had a wide and varied experience in retail pharmacy practice, as a pharmaceutical educator, and in hospital pharmacy. He was graduated from the Massachusetts College of Pharmacy in 1932, and later received the degree of Ph.C. (Pharmaceutical Chemist) from the same institution at which time he served on the faculty of the Massachusetts College of Pharmacy in its Pharmacy Department. His initial training and experience in pharmacy was obtained under the direction of the late Professor E. LaPierre, Dr.

Leon A. Thompson and Dr. Leslie M. Ohmart, all nationally known New England Pharmacists and Pharmaceutical educators. On the recommendation of Dr. Ohmart, Mr. Dodds was appointed chief pharmacist at the Lynn Hospital in 1935 where he served for almost 16 years, participating in the reorganization of the hospital and its pharmaceutical service.

Professional affiliations held by Mr. Dodds include the American Pharmaceutical Association, the American Society of Hospital Pharmacists, the Massachusetts Society of Hospital Pharmacists, and Kappa Psi Pharmaceutical Fraternity. His activities as chairman of the American Society of Hospital Pharmacists' Narcotic Committee are widely known among hospital pharmacists. He is the author of several published papers concerning pharmacy practice in hospitals. He has served as one of the Hospital Division's consultants in hospital pharmacy practices for several years and was one of the consultants who aided in the designing of the hospital pharmacy of the new Public Health Service Clinical Center in Bethesda.

### 1952 Institute Site

Toronta, Canada has been selected as the site for the 1952 Institute on Hospital Pharmacy. This year, the Canadian Society of Hospital Pharmacists will join with the American Hospital Association, the A.Ph.A. and the ASHP in sponsoring the Institute. Meetings will be held on the campus of the University of Toronto during the week of June 23.

Heading the Institute Planning Committee will be ASHP President Walter Frazier. Other sponsoring groups will be represented on the planning committee and the Canadian Society will have a local committee. Official announcement and applications for registration will be sent to all members of the ASHP early in 1952.

### Kansas City Hospital Pharmacists Organize

Hospital pharmacists in the Kansas City Area have joined to form the Association of Hospital Pharmacists of Greater Kansas City. Officers of this group are Mr. Fred Theis, president, Menorah Hospital, Kansas City, Mo.; Miss Ethyl Barnard, vice-president, Research Hospital, Kansas City, Mo.; Mr. LeRoy Boyle, secretary, University of Kansas Medical Center, Kansas City, Kansas; and Mr. J. C. Chipman, treasurer, St. Mary's Hospital, Kansas City, Mo.


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### PHARMACY FOR HOSPITAL ADMINISTRATORS

George F. Archambault, chief, Pharmacy Branch, Division of Hospitals, Public Health Service spoke on "The Administrative Side of a Hospital Pharmacy" on November 9 at the Fifth Inter-Agency Institute for Hospital Administrators. The Institute was conducted by the Public Health Service this year with participating agencies including the Department of the Army, Department of the Navy, Department of the Air Force, Veterans Administration, Bureau of Indian Affairs and the PHS. Although four previous meetings of this type have been held, this is the first time a representative of pharmacy has participated. Dr. Archambault gave the administrators a complete background of pharmacy operation and how it can be correlated with the total hospital operation, including drug costs, a basic drug list, manufacturing and prepackaging. In conjunction with this, the *Division of Hospitals Operations Manual,* just released by the PHS, was presented to each administrator. Here, detailed information concerning pharmacy management, pharmaceutical manufacturing, narcotics, hypnotics and alcoholic liquors, bulk stores, etc. is outlined for the pharmacist as well as for the administrator.

The Institute covered a period of three weeks with two and one-half days devoted to intensive training in conference techniques followed by 23 formal presentations covering large areas of the field of hospital administration, and one panel discussion. With the purpose of guiding hospital administrators in their efforts to provide the best possible care for patients, participants in this Institute included representatives of every branch of the government.

### AHA COMMITTEE ON PHARMACY

The American Hospital Association has recently announced the members of its Committee on Pharmacy for the current year with Dr. Robert R. Cadmus, University Hospitals in Cleveland as chairman. Members of the committee include Mr. Don E. Francke, University Hospital, Ann Arbor, Michigan; Mr. Hans S. Hansen, Grant Hospital, Chicago, Ill.; Dr. W. Arthur Purdum, Johns Hopkins Hospital, Baltimore, Md.; Dr. George C. Schicks, Hospital of St. Barnabas and for Women and Children, Newark, N. J. and Dr. Joseph Snyder, Vanderbilt Clinic, Presbyterian Hospital, New York, N.Y.

### EDITOR OF "HOSPITALS" DIES

John M. Storm, editor and business manager of *Hospitals,* Journal of the American Hospital Association, and *Trustee* magazine, died on November 4. He was with the AHA since 1943.

# NEW MEMBERS

NOVEMBER 1, 1951

ARIZONA
Goldberg, Simon M., 430 Vananda, Ajo

CALIFORNIA
Evans, Brax C., 395 Merrill, Apt. E., Glendale
Hackett, Joseph J., 55 Mercury Rd., Belveron Gardens, Mill Valley
Howey, Mary N., 1234 S. Berendo St., Los Angeles
Pohling, Ilse O., Pharmacy, Merced General Hospital, Merced
Riegelman, Sidney, Univ. of Calif. Med Center, Coll. of Pharm., San Francisco (A)

CONNECTICUT
Singer, Edmund J., 61 Van Zant St., E. Norwalk
Webb, John W., 81 Holland Ave., East Hartford

DISTRICT OF COLUMBIA
McNamara, Capt. Jack W., Qtrs. No. 216, Army Medical Center, Washington

FLORIDA
Adams, Chauncey C., U. S. Naval Hospital, Jacksonville

ILLINOIS
Almond, Albert, 1011 S. Humphrey, Oak Park
Sister M. Vera Jendrusch, 400 New York, Aurora

LOUISIANA
Whitehead, Doyce O., 702 Wheelock Ave., Alexandria

MASSACHUSETTS
Goldstein, George, 65 McLellan St., Dorchester

MICHIGAN
Krasity, John Jr., 3612 Weddel, Dearborn
Nycz, Edward W., 5712 Springwells, Detroit
Schalz, George M., 19248 Omira, Detroit

MINNESOTA
Gaul, Hermina, 449 Banfil St., St. Paul

MISSOURI
Goosby, Carmel T., 4272 Washington, St. Louis

NEW YORK
Ellsworth, Gerald P., 1400th Medical Squadron, APO 81, c/o Postmaster, New York
Morse, Alvina J., 169 Winbourne Rd., Rochester
Schaab, Lois K., 221 Orange, Buffalo

OHIO
Current, Marjorie L., R.R. 7, Dayton
Kucia, Frank P., 2322 E. 31st., Lorain

OKLAHOMA
Alexander, Garold L., 723 N. Broadway, Weatherford (A)
Brown, Edwin E., Hydro (A)
Dickens, Gilbert, 711½ N. State, Weatherford (A)
Hamilton, Robert W., Rm. 302 Neff Hall, Weatherford (A)
Hiett, Ralph E., 328 Neff Hall, Weatherford (A)
Kastner, Mike, 723 N. Broadway, Weatherford (A)
Litsch, Dale, 218 E. Main, Weatherford (A)
Long, Jacqueline, Hydro (A)
Loyd, Marion J., Apt. E5, Vettsville, Weatherford (A)
Patterson, John T. Jr., 120 E. Main, Weatherford (A)
Royse, R. D., Box 373, Weatherford (A)
Russell, Lee S. Jr., Neff Hall, Weatherford (A)
Russell, Rita, Hydro (A)
Scott, Donald F., 302 Neff Hall, Weatherford (A)
Shelton, L. E., 522 N. Bradley, Weatherford (A)
Shortt, Urban C., Hinton (A)
Smith, Robert G., 611 N. Custer, Weatherford (A)
Vogel, Thomas E., Neff Hall, Weatherford (A)

OREGON
Riggs, Leib L., 1138 S. W. Morrison, Portland (A)
Sorenson, Arthur N., 3330 S. E. 66th Ave., Portland (A)

PENNSYLVANIA
Barlow, Sara A., 1 South Valley Rd., Paoli
Junck, Rhoda A., 1315 W. Rockland, Philadelphia
Lewbart, Marvin L., Jefferson Medical College Hospital, Philadelphia (A)
Lyon, Albert M., 1353 N. 76th St., Philadelphia
Maiorino, William, Jefferson Medical College Hospital, Philadelphia (A)

SOUTH CAROLINA
Durham, Miriam, Tuomey Hospital, Sumter

TENNESSEE
Como, Polly W., Box 216, Memphis State College, Memphis
Flemmons, Dorothy, Kennedy Hospital, Memphis
Hendricks, John M., 3229 Carnes Ave., Memphis
Honda, Paul H., U. S. Public Health Service Hospital, Memphis
Massey, Mary C., 2432 Union Ave., Memphis
Mitchum, Norma Ann, 811 Jefferson, Apt. H, Memphis
Norton, Fred Jr., 3480 Rosamond, Memphis (A)
Swafford, William B., 544 W. Clover Dr., Memphis
Teague, Bascom R., 817 Shotwell, Memphis
Townsley, Bonnie G., 2390 Lamar Ave., Memphis
Winston, Eugene H., 929 Goodman Rd., Memphis

TEXAS
Baltruzak, Albert V., 607 Sunset Blvd., Lufkin

UTAH
Heinz, Jack B., 87 A St., Salt Lake City (A)

VIRGINIA
Jones, Maj. Herman A. Jr., MSC., 3426-A So. Utah St., Arlington (A)

WASHINGTON
Sandow, Theodore G., Medical Lake

WISCONSIN
Ward, Mildred A., 3361 W. Ruskin Ave., Milwaukee

CANADA
Sister M. Gerald, St. Joseph's Hospital, Guelph. Ont.

# POSITIONS IN HOSPITAL PHARMACY

## POSITIONS OPEN

COLORADO—Opening for pharmacist at Denver General Hospital. Forty-hour week, no night work, holidays and weekends off, annual and sick leave, retirement plan, and merit increase plan. Salary to start $234.00 per month. For further information write to Mr. Samuel Kohan, Chief Pharmacist.

NEW JERSEY—Position open for assistant pharmacist in 300 bed hospital. Must be registered or eligible for registration in New Jersey. State education and experience, salary requirements and references. Include recent photograph with application. Forty-four hour week, 2 weeks vacation and 12 days sick time allowed. Write to Geraldine J. Stockert, Chief Pharmacist, Monmouth Memorial Hospital, Long Branch, N. J.

OHIO—Opening for staff pharmacist in 465-bed general hospital with out-patient clinic. B.Sc. degree and one year's experience required; 40-hour week; starting salary $3640 or more depending upon experience; two increases during year. Non-academic internship program with opportunity to do graduate work at near-by colleges. For further information contact Mrs. Evlyn Gray Scott St. Luke's Hospital, Cleveland 4, Ohio.

The following openings in hospital pharmacy appeared in current issues of hospital publications. Anyone interested in the positions should write directly to the Agency indicated. A fee is charged when positions are secured through the services of a personnel agency.

MICHIGAN—University of Michigan Hospital, Ann Arbor, has openings for staff pharmacists. For additional information please write to the chief pharmacist.

PHARMACIST—Chief; 250-bed general hospital; town, 90,000 Midwest; $5400—$6000, woman eligible. H10-12. The Medical Bureau, Burneice Larson, Director, Palmolive Bldg., Chicago, Ill.

PHARMACISTS—(a) 70-bed, approved, general hospital; vicinity Illinois state capital; $400. (b) Small 50-bed clinic-hospital owned by seven-man group; Indiana resort locale; $100 per week up. (c) Approved, general hospital, will be completed early 1952 southern Virginia; $5400. (d) Do buying of medical and surgical supplies and pharmaceutical supplies; Michigan resort area; $325. Woodward Medical Personnel Bureau, 185 N. Wabash Ave., Chicago 1, Ill.

PHARMACISTS—(a) Chief; 300-bed hospital; duties include purchasing; college town, Midwest. (b) Fairly large hospital; small town near Washington, D. C. H11-10. The Medical Bureau, Palmolive Bldg., Chicago, Ill.

ILLINOIS—Three positions open for junior pharmacists at the University of Chicago Clinics. Must be registered in Illinois or be able to reciprocate in Illinois. Young man or woman available immediately. 41½ hour week. For additional information contact Miss Florence Hatter Chief Pharmacist University of Chicago Clinics, 950 E. 59th St., Chicago 37, Ill.

## POSITIONS WANTED

WOMAN—graduate of University of Wisconsin College of Pharmacy with retail and hospital experience desires position in Midwest in 500-1000 bed hospital. For further information write to the Division of Hospital Pharmacy, 2215 Constitution Avenue, N. W., Washington 7, D. C. (PW-35)

The Division of Hospital Pharmacy of the American Pharmaceutical Association in cooperation with THE BULLETIN maintains a placement service for hospital pharmacists. Anyone interested in availing themselves of this service may write to the Division giving pertinent information in regard to education and experience. A notice will be placed in THE BULLETIN on request. Adequate information about the person's qualifications as well as the type and size of institution in which he wishes to work, location, etc., is essential.

The service does not undertake to recommend applicants, but aims to serve as a clearinghouse for hospital pharmacists interested in positions and for hospitals interested in employing a pharmacist. Individuals will be notified by letter of openings which they may be qualified to fill. Requests for positions are kept on an active list until the Division is notified that the person has accepted a position or is no longer interested.

There is no charge for this service. All communications should be addressed to The Division of Hospital Pharmacy, American Pharmaceutical Association 2215 Constitution Ave., N. W., Washington, D. C.

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| Folic Acid | 1.67 mg. | 5 mg. |
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| (as ferrous sulfate exsic.) | 230 mg. | 690 mg. |
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*Sedative-antitussive effects of Methajade control sleep-robbing paroxysmal cough—allow patients to get needed rest.*

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METHAJADE® spares your patients the needless violence of exhausting, "unproductive" cough—without depriving them of the benefits of normal expectoration.

Because it contains *methadone*, the synthetic analgesic-antitussive, METHAJADE is capable of suppressing the irritability of the cough reflex without blocking it entirely.

Because it contains potassium citrate and diluted phosphoric acid, METHAJADE promotes the liquefaction and loosening of mucus, facilitating the expulsion of bronchial exudate and debris.

Because it relaxes smooth muscle, including that in the tracheobronchial tree, METHAJADE is effective in relieving the bronchial spasm often associated with coughs.

Together, these actions tend to *decrease* the frequency and *increase* the efficiency of coughing, and to relieve bronchial spasm. METHAJADE is therefore well qualified as a practical aid in achieving the modern objectives of cough control:

(1) *to* preserve *the natural physiologic benefits of the cough—*
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| Methadone hydrochloride* ..... (*d,l*-6-dimethylamino-4,4-diphenyl-3-heptanone hydrochloride) WARNING: may be habit forming. | 10 mg. |
| Propadrine®, phenylpropanolamine hydrochloride .. ..... | 0.12 Gm. |
| Potassium citrate ..... | 1.2 Gm. |
| Diluted phosphoric acid ..... | 4.5 cc. |
| Alcohol 5% | |

**Average Dose for Adults:** 1 to 2 teaspoonfuls every three or four hours.

CHILDREN:
(*note:* METHAJADE *should not be administered to children under 2 years of age. In children 2 years of age or older,* METHAJADE *should be used only in cases of severe, intractable cough.*)
*Two years:* ¼ teaspoonful not more often than every four hours.
*Five years:* ½ teaspoonful not more often than every four hours.
*Ten years:* 1 teaspoonful not more often than every four hours.

**Packaging**—METHAJADE is supplied in pint Spasaver® bottles and gallon bottles.
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**The analgesic potency of methadone hydrochloride is—weight for weight—approximately equivalent to that of morphine. It controls cough as well as, or better than, codeine. Methadone hydrochloride is subject to the provisions of the Harrison Narcotic Act.*

# METHAJADE® Antitussive

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